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ABSTRACT

A project was conducted in Pennsylvania to design a statewide system for establishing regional pools of qualified teachers for potential staffing of local vocational training programs in secondary schools. The objectives of the project were to facilitate recruitment and retention of qualified vocational education instructional staffs by providing mechanisms which would allow for (1) creation of awareness among tradespeople of the teaching alternative and its requirements; (2) development of preservice training programs for persons in trades; (3) identification of a pool of qualified persons for regular or substitute teaching; (4) strengthening of public confidence in vocational education teachers' teaching skills; (5) development of a better relationship between industry and vocational-technical schools; and (6) provision of more definite guidelines for the outreach services of teacher education. The project was accomplished primarily through a comprehensive data collection effort with participants from area vocational-technical schools, labor, and industry organizations, vocational education personnel development centers, and vocational education programs of other states. It was decided after accumulation of data not to implement a new, costly personnel identification system, but to tie in with existing resources, especially with the system of Indiana University of Pennsylvania. The final project report provides recommendations for a comprehensive and integrated vocational education personnel system incorporating features for labor market needs analysis, people/position matching, personnel management information reporting, vocational education awareness, incentives and benefits, pre- and inservice training, and teacher competency and certification. (Author/KC)

ED215083

EXECUTIVE SUMMARY

FINAL REPORT

THE ESTABLISHMENT OF A VOCATIONAL EDUCATION PERSONNEL SYSTEM TO ASSIST IN THE INSTRUCTIONAL STAFFING OF VOCATIONAL-TECHNICAL PROGRAMS

(Contract Number~~s~~ ~~83-9822~~ and 83-0801)

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RESEARCH COORDINATING UNIT
FOR VOCATIONAL EDUCATION

CE 031 338

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INTRODUCTION

This report is in response to the Pennsylvania Department of Education request for proposal to design a state-wide system for establishing regional pools of qualified teachers for potential staffing of local vocational training programs. The basic problems addressed throughout this project were:

- What measures can be taken to increase awareness of and interest in careers as vocational education teachers?
- What measures can be taken to enhance pre-service training opportunities so as to assure minimal pedagogical skills particularly for the trade/industrial and technical curricula?

Data compiled and action programs presented are oriented toward meeting instructional staffing needs of area vocational-technical schools. However, it is likely that the report is also relevant to vocational education departments of comprehensive secondary schools.

The major conclusion of this study was that: "Analyses and evaluations of data indicated that neither past experience of teacher turnover nor the projection of teacher needs justify the design and implementation of a new state-wide system of regional pools of qualified teachers." The report recommends development and enhancement of the computerized system for tracking in-service training and placement of graduating students used by the Indiana University of Pennsylvania.

The study points out that a personnel information system designed to facilitate recruitment and maintenance of appropriately qualified vocational instructional staffs must be an integrated and comprehensive system embracing many elements including:

- labor market needs analysis
- personnel management information reporting
- people/jobs matching and referral
- vocational education awareness
- incentives and benefits
- pre- and in-service training
- teacher certification and competency.

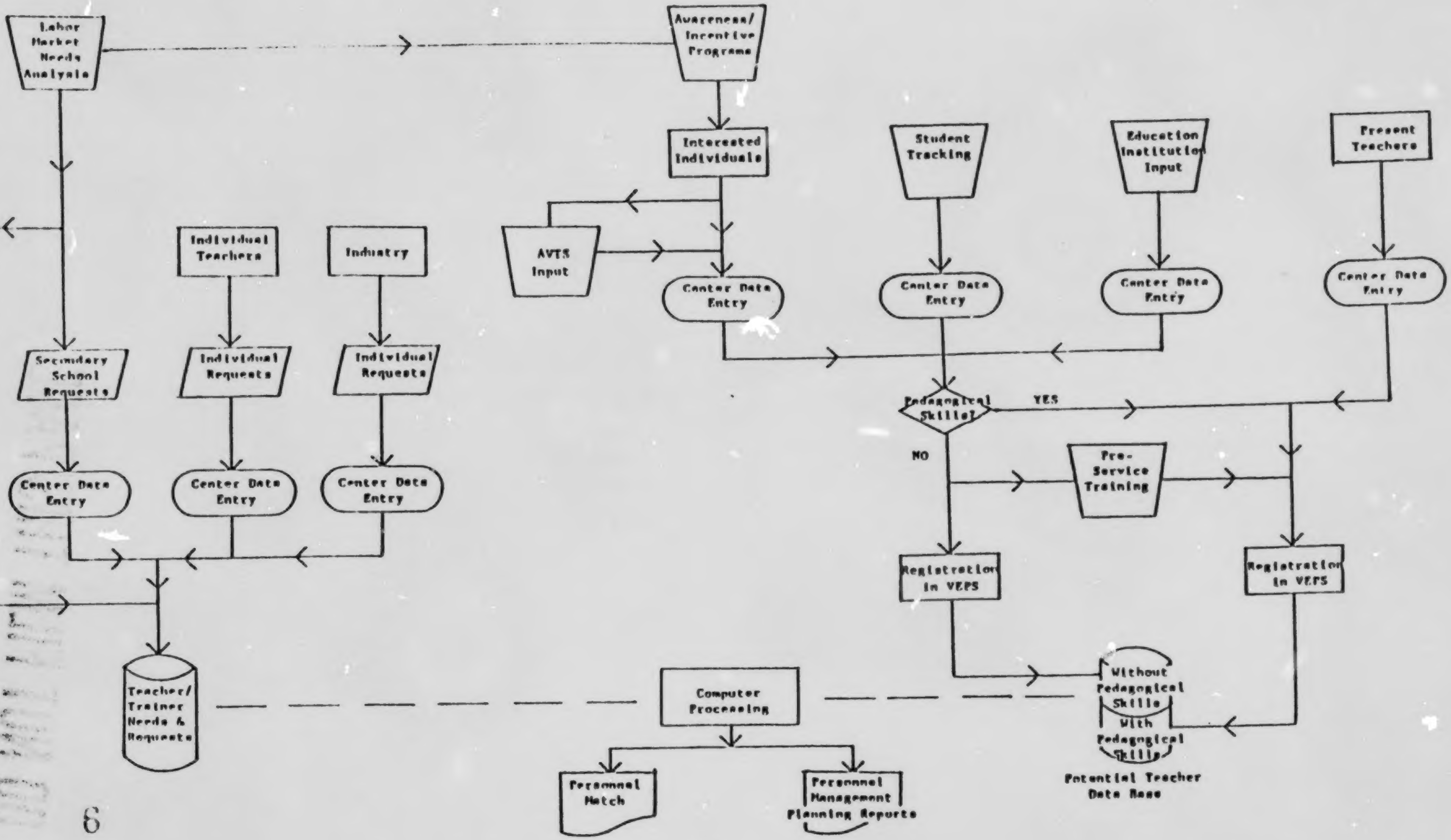
This Executive Summary is in essence a management plan which presents the recommendations contained in the report, identifies entities responsible for developing and implementing action programs, and provides time estimates for completing recommended actions. Most of the recommendations provide for some re-direction of current activities rather than high-powered and costly new initiatives.

Acronyms used throughout this summary include:

AVTS	Area Vocational-Technical School
BVE	Bureau of Vocational Education
Centers	Vocational Education Personnel Development Centers
Indiana	Indiana University of Pennsylvania
L&H	Laventhol & Horwath
NOCTI	National Occupational Competency Testing Institute
PDE	Pennsylvania Department of Education
Penn State	The Pennsylvania State University
Pitt	University of Pittsburgh
Temple	Temple University
VEPS	Vocational Education Personnel System

An overview flowchart of the suggested VEPS is presented on the following page.

VOCATIONAL EDUCATION PERSONNEL SYSTEM
(VEPS)


Labor Market Needs Analysis
Awareness/ Incentive Programs
Interested Individuals
Student Tracking
Education Institution Input
Present Teachers
AVTS Input
Individual Teachers
Industry
Center Data Entry
Center Data Entry
Center Data Entry
Center Data Entry
Secondary School Requests
Individual Requests
Individual Requests
Pedagogical Skills?
YES
NO
Pre-Service Training
Center Data Entry
Center Data Entry
Center Data Entry
Registration in VEPS
Registration in VEPS
Teacher/ Trainer Needs & Requests
Computer Processing
Without Pedagogical Skills
With Pedagogical Skills
Potential Teacher Data Base
Personnel Match
Personnel Management Planning Reports

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LABOR MARKET NEEDS ANALYSIS

Data obtained through labor market needs analysis should provide much of the foundation for AVTS program planning and decision making essential to development and implementation of effective vocational education programs. If AVTSs are to accomplish their primary mission of providing students with marketable skills, actions to fulfill such mission should be based on valid and reliable data reflecting the labor market needs of the area served by each AVTS. Needs are not static, thus there should be continuity of needs analysis efforts to be responsive both in terms of substance and timeliness of training.

To facilitate the development and implementation of appropriate labor market needs analysis programs, it is recommended:

1. A model labor market needs analysis system should be designed which, with minimal local adaptations, would provide information required by AVTSs to plan their respective vocational educational programs and at the same time furnish data useful to the Centers and the PDE for developing teacher training policies and programs. The model should consider such factors as:

    - responsibility for the needs analysis effort and identification of participants and their roles (i.e. advisory councils, craft committees, industry, labor, etc.)

    - intended purposes and uses of information (i.e. student counseling, curricula revision, equipment and facility modernization, pre- and in-service teacher training, awareness and incentive programs, operating and capital budget planning etc.)

    - specific data requirements (i.e. industry indentification, trade identification, skill level requirements, desired personal attributes, projected job openings, strenghths and weaknesses of VE graduates in the work force, etc.)

    - potential sources of relevant data

    - forms and procedures for data collection and analysis/evaluation

    - intended distribution of survey forms and instructions (i.e. comprehensive, selected industries, selected trades, etc.)

- analysis/evaluation of survey data including relationship to turnover, vacancy, student interest and other data
- furnishing data to Centers and the PDE
- decision making as to courses of action
- planning, scheduling and implementing changes

2. The model should be developed under the auspices of the PDE with input from the Centers, AVTSs, labor, industry, professional and trade associations, etc. The model could be developed in-house or through a consultant contractual arrangement.
3. The model should be tested before being made available state-wide.
4. The model should be designed with sufficient flexibility to permit use on either an annual or cyclical basis. A cyclical plan should require that each curriculum be surveyed at least every three years.
5. Since data would also be made available to the Centers and the PDE, the Centers and the PDE should provide implementation advisory/consultative services and the PDE should consider funding such assistance.

VOCATIONAL EDUCATION PERSONNEL SYSTEM (VEPS)

The Vocational Education Personnel System (VEPS) as envisioned by L&H is composed of many parts. It is broader than just the manual or electronic matching of an AVTS director's request with a potential teacher. It encompasses the additional elements of awareness, incentives, certification requirements, labor market needs analysis and pre-service programs. Each of these elements, although addressed in other sections of this report, should be considered an integral part of an integrated and comprehensive VEPS.

With respect to an overall system, the following alternatives or options were considered:

1. Do nothing in that the systems now in place are able to fill the majority of the AVTS directors' needs for teachers. However, this alternative is rejected because it cannot deal with the primary problem facing the AVTSs; that is, the hiring of new teachers who have both trade competency and the desired pedagogical skills. The State has recognized the weaknesses in the current systems as evidenced by this project. It should be borne in mind that the current systems meet the basic needs of the AVTS directors even though qualifications are not always as desired and the burden of teacher recruitment rests primarily on the directors.

2. Implement, in a phased manner, the recommendations presented below and in other sections of this report. This approach would require the following:

   - implementation of an awareness program informing of the teaching alternative to trades practice and the requirements to become a teacher

   - modification of certification requirements

   - enhancement of the existing vacancy/personnel matching systems.

The above three actions should be performed and the results evaluated. The objective is to get more and better qualified individuals applying for positions primarily in the trade/industrial and technical areas. The cost for the above action steps would be minimal.

If the above actions do not provide the quantity of qualified teachers desired, two additional steps should be taken to enhance the prospects of success. These steps are:

- establishment and/or extension of incentive programs which take into consideration pre- and in-service incentives, market place supply and demand factors and local and State budgetary constraints
- establishment and/or extension of regional pre-service training programs which offer individuals the opportunity to acquire pedagogical skills in a readily accessible, timely and cost effective manner.

The addition of these two items should provide the impetus necessary to establish the resources pool of qualified teachers. The two separate phases are recommended primarily from a cost justification standpoint. The second phase activities are more costly and may be unnecessary if the awareness programs and certification modifications are successful in creating a pool of interested and qualified potential teachers.

3. Concurrent implementation of all the steps named in alternative 2. This would require actions to improve existing awareness programs, modification of certification requirements, establishment and/or extension of incentive and pre-service training programs, and enhancements to the existing vacancy/person matching systems.

It is recommended that alternative 2, the phased approach, be implemented for the following reasons:

1. This approach provides the opportunity to determine and evaluate the effectiveness of various actions to increase the quality and quantity of personnel; such as whether it is due to awareness or incentive programs or to a change in certification requirements.

2. It is the least costly, initially, of the two alternatives which address the problem of providing more quality teachers.

3. The needs of the AVTSs may not justify the full scale approach in light of actual turnover experience and higher costs associated with the concurrent implementation of all recommendations.

In regard to the operational aspects of the VEPS, it is recommended that:

1. Regional pools of qualified individuals be established based on the current geographical regions served by the Centers

2. The Indiana system be used to store and retrieve information relating to the needs of the participants (i.e. State, Centers, AVTSs, other secondary and post-secondary institutions, industry and individuals).

3. The Indiana system, which contains only current data, should be modified to provide for the retention and retrieval of specific personnel management information including:

   - historical turnover data (i.e. vacancy identification by curricula, level of certification, location, frequency, etc.)

   - potential teacher registration data

   - data re current openings.

   The ability to expand a personnel search beyond the region of the requesting AVTS to the entire State should be provided. Thus, it is recommended that all Centers join in the use of Indiana's system to provide a centralized, uniform system available to the AVTS directors through their respective Regional Centers. Each Center should be responsible for direct input to its segment of the files and for responding to requests from AVTS directors for job candidates.

   Upon compilation and summarization, personnel management reports should be furnished to the Centers and the PDE for program planning purposes. The reports should indicate those areas which require the greatest effort on the part of the State and the Centers to prepare programs for training new teachers for the future. The information which would flow from the AVTSs into the VEPS should not duplicate information now going into existing State systems such as VEMIS.

4. Data on individuals who are enrolled in or have completed pre-service training should be registered in the system. This will increase the pool of individuals which directors can access.

5. AVTS directors and other interested parties should be informed of the availability and capability of the VEPS and they should be encouraged to use it by submitting requests through their respective regional Centers.

6. The AVTSs should use student tracking mechanisms to identify former students who have sufficient requisit wage and learning experience to consider the teaching alternative; such persons should be advised about the teaching opportunity and requirements and be registered in the VEPS if interest is indicated.

7. Current teachers should be surveyed to determine mobility and those interested in moving to another AVTS should be encouraged to register in the VEPS. These individuals would already have many, if not all, of the requisit experience but may have personal reasons to seek change. Teachers desiring change should be able to register in VEPS without prejudice.

Proper use of the Indiana system will allow for the availability of information on a current basis. Effectiveness of the system is dependent upon the cooperation of the Centers and AVTSs to supply the necessary data to the system. Each Center should be responsible for entry of data for the AVTSs in its region, maintenance of its data files, and transmittal of the output results to the AVTS directors.

The AVTSs should be responsible to supply information on vacancies and turnover to the Centers. Additionally each director, through his Center, should use the VEPS to fill positions and inform the VEPS when positions have been filled.

Indiana should have the responsibilities of first, its activities as a Center and second, to provide programming and data processing support for the VEPS. Thus, Indiana would be responsible for system modifications to maintain data files on turnover, certification, vacancies and current openings; to respond to requests from AVTS directors via the Centers; and to provide reports for Centers and PDE planning purposes.

The BVE should work with Indiana and the other Centers to determine if additional information is desired and how such data might be used in the planning process.

VOCATIONAL EDUCATION AWARENESS

The findings of this portion of the study indicate there is a need for an awareness program targeted at several specific segments of the population. It is appropriate for each AVTS to provide a comprehensive and broad-appeal awareness program. Such program should be oriented toward informing the community at large of: the objectives of AVTS programs, the scope and nature of efforts to meet needs of the students and the community, plans to revise and improve programs to meet changing needs, the need for support of all elements of the community, and the kinds of community participation needed to effectively support the AVTS. However, the substance and direction of awareness efforts need to be designed to give increased emphasis to teaching as an alternative to trades practice, requirements to become a vocational education teacher and incentives/benefits associated with teaching.

In view of the above, and recognizing that a well-rounded awareness program has multiple purposes and objectives, the recommendations which follow are oriented toward the limited objectives of increasing awareness of the teaching alternative and the requirements to pursue a vocational education teaching career. A discussion of incentives/benefits is presented in Section VI, Incentive Programs.

The objective of an awareness program developed for these areas is two-fold:

- To increase the quantity of persons interested in the teaching alternative through:
  - providing an awareness of the teaching opportunity as an alternative to trade practice
  - providing an awareness of the requirements to become a vocational education teacher.
- To increase the quality of potential teachers by the pursuit of pre-service training through:
  - non-degree certification programs
  - degree programs.

The development of an effective awareness program should include the following essential elements:

- targeting according to subject
- addressing the appropriate audience
- selecting the appropriate communication mechanism
- determining responsibility for development and implementation
- timeliness of execution
- evaluating cost vs. benefits to be derived.

To accomplish the above objective and to reach the various target segments of the population, the Pennsylvania Bureau of Vocational Education (BVE), Centers, AVTSs and their supporting organizations must participate and cooperate in the development and implementation of the awareness program.

BUREAU OF VOCATIONAL EDUCATION

The role of the Bureau of Vocational Education (BVE) should be to provide awareness programs which will communicate state-wide the availability of the teaching alternative and the requirements for pursuing this alternative. Awareness materials should identify the non-degree curriculum areas of certification and those areas with the greatest demand. Information on the curriculum areas with the most demand is not now available because vacancy and turnover data are not routinely reported by AVTSs. Centers need this information to plan recruiting efforts and to develop appropriate curricula. Since this information is needed by both the Centers and the State, it is recommended that AVTS directors report all vacancy and turnover data to their respective Centers for inclusion in the data base of the VEPS. The information from the Centers files can be compiled and forwarded to the BVE.

Awareness efforts should include information indicating a college degree is not necessary to obtain certification for many of the vocational education curriculums. Awareness materials should also indicate an individual can obtain educational training while still employed in their trade, or educational courses can be obtained after acquiring a position. Several mediums can be used to accomplish this promotional effort. To avoid duplication of time, money and effort, the BVE should be responsible for developing brochures, posters, and other materials to advertise the teaching alternative and the State teaching requirements. State sponsored public service announcements should be developed to convey this information via television, radio, newspapers, etc.

These promotional materials should be designed for distribution to the general public. The State should provide materials to the Centers, AVTSs, and Veterans Educational Representatives at all local offices of the State Office of Employment Security and other appropriate agencies or institutions for further distribution.

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT CENTERS

The role of the Centers should be a generalized role similar to the BVE's but on a regional basis and targeted at different segments of the population. Centers should concentrate their efforts on getting individuals enrolled in programs leading to certification -- pre-service and in-service. Using the vacancy and turnover data from the VEPS system, Centers can target recruiting efforts to the trade/industrial and technical areas of greatest demand.

Awareness materials need to be developed by the Centers that will supplement the BVE materials. Several mediums can be used to create this awareness. Recruitment posters with business reply cards should be developed so individuals can easily request additional information. Mailings should be sent to members of trade associations, unions, and other groups of trades practitioners. In addition, presentations can be made at meetings of these organizations. Brochures explaining the Centers' vocational education programs should be developed for distribution to Community colleges, AVTSs, input schools, vocational education student organizations and other appropriate agencies and institutions.

These materials should explain the specific educational requirements of the Center. Procedures for enrolling in pre-service or in-service training programs and the various methods in which this training can be obtained should be provided. Present incentive information, such as tuition differentials, should be included. Centers should provide information about the NOCTI examination and indicate how a teaching position can be obtained upon successful completion of this examination.

Centers must conduct these awareness efforts on a regular basis in accordance with the present and projected demand conditions.

Another role of the Centers should be to provide AVTSs with advisory services on development and implementation of an effective awareness program. Centers can provide AVTS directors with materials they have developed and assist AVTSs in developing additional materials to supplement the Center information. Centers should inform AVTS directors that these services are available.

AREA VOCATIONAL-TECHNICAL SCHOOLS

The role of the AVTS awareness program should be localized including both a specific and generalized component.

The generalized component should include the distribution of awareness program materials developed by the BVE, Centers and AVTSs. Such distribution should be to local industry, labor organizations, and other entities. Awareness promotional materials should be distributed on a personal contact basis when feasible and thereby call attention to the import of the material.

Another facet of this generalized program should include presentations to local service, trade and professional associations. At these presentations, directors should encourage assistance to enroll individuals in pre-service programs at the Centers. Names of persons who evidence interest should be forwarded to the Centers for registery in the VEPS.

As a part of the AVTS student tracking procedure, directors should determine interest of graduates in the teaching alternative. Names of interested individuals should also be forwarded to the Centers for registry in the VEPS.

Directors should encourage teachers to incorporate guest speakers from industry into their teaching plans. This provides an opportunity for industry personnel to obtain first-hand teaching experience and will aid in creating an awareness in industry of the teaching alternative. Directors should be alert to opportunities to obtain teachers through industry outplacement programs.

The generalized awareness programs should be performed on a regular basis rather than a "one-shot" highly concentrated basis.

When openings occur and AVTS directors need a specific teacher, they should clear initially with the VEPS to determine availability of candidates. If such clearance is not productive, the mechanisms mentioned in the generalized component can be repeated but related to the specific area of certification. Free public service announcements are frequently available through the various communications media to create an awareness of a specific opening. Contact should be made with Veterans Employment Representatives indicating specific present and/or potential need. Also, CETA Offices should be contacted for names of former CETA teachers. The measures taken by a director when an opening occurs should be specifically tailored to fill the position in a timely manner.

INCENTIVE PROGRAMS

While the findings of this study do not reflect recruitment of vocational education teachers as being a major problem, some positions in the trade/industrial and technical areas have been identified as being hard-to-fill and persons having little or no pedagogical training are being hired. Thus, it would appear to be appropriate to develop pre- and in-service incentive programs which would facilitate recruitment, strengthen qualifications, and enhance retention for such curricula.

Incentive programs should give due consideration to supply and demand factors as pertaining to hard-to-fill positions. Effective personnel administration dictates that exceptional measures be taken to meet exceptional needs at a given point in time. Thus, AVTS administrators should establish flexible incentive policies and programs which will permit recruitment of defined quantity and quality of instructional personnel.

Flexibility implies continuing awareness of:

- those curricula which constitute the hard-to-fill instructional need
- those supply and demand factors which indicate the nature and extent of incentives to be applied in a given set of circumstances.

Implementation of the following recommendations should be supportive of efforts to strengthen AVTS instructional staffs:

1. Information pertaining to pre- and in-service incentive and benefit programs should be an integral part of the program recommended in Section V, Vocational Education Awareness.
2. Use of pre-service incentives should be based on supply and demand factors at a given point in time and reflect the inducements required to recruit an appropriately qualified person at such time. Thus, the same inducements may not be appropriate for every recruitment effort; rather, they would be related to the needs of each individual hiring effort.
3. Use of pre-service incentives should be extended and monitored closely, at least on a trial basis, to determine their impact on the quantity and quality of applicants. Such incentives should include:

- compensation recognition for experience and/or training beyond the minimum requirements for various levels of certification

- reimbursement for expenses associated with competency tests provided such tests are taken at the request of the potential employer

- grant and/or loan programs to assist interested persons to acquire pedagogical skills on a pre-service basis and incorporating a contractual obligation to teach for a specified minimum period (such programs should be limited to the eighteen credits required for the VI I certificate)

- continuation and/or extension of tuition differentials

- one-time bonus on employment.

4. The responsibility for application of pre-service incentives should be divided between the PDE and local entities as follows:

   - State
     - Grants
     - Loans, perhaps with forgiveness features
     - Tuition differentials
     - Increased contribution to competency testing
     - Tuition payments for pre-service training for hard-to-fill positions
     - Pay costs associated with pre-service orientation programs

   - Local
     - One-time bonus on employment
     - Reimbursement for trade competency testing
     - Compensation in recognition of trade experience
     - Tuition reimbursement, possibly to include retroactive considerations
     - Training travel expense reimbursement.

PRE-SERVICE TRAINING

All Centers presently have some method of supplying pre-service training to interested individuals. Present programs should be strengthened to meet the specific needs of pre-service individuals and give due consideration to supply/demand factors. Accessibility, timeliness, and cost are key factors to individuals wishing to obtain pre-service training while presently practicing their trade.

1. Satisfactory completion of an orientation program designed to provide some measure of preparation for the transition from trades practice to teaching should be a PDE requirement for persons having no other pre-service pedagogical qualifications. This can be accomplished through modification of the Intern certificate.

2. Efforts to strengthen the orientation programs should include:

   - provision for orientation training information in awareness and recruitment programs

   - more timely hiring to permit orientation prior to school openings and to help overcome problems related to prior commitments

   - timely and accessible offerings of the orientation program

   - pay and expense status in accord with local supply and demand factors

   - credit toward certification.

3. It is recommended that the Centers act jointly, under State auspices, to develop a competency-based vocational education program which would satisfy requirements for certification as Vocational Instructional Level I. The competencies should consist of the hard core basic subject matter considered essential to effective performance in the classroom.

4. Pre-service non-degree training programs should be made more accessible through the existing mediums of campus-based, outreach, and field-based courses. Consideration should also be given to providing the non-classroom elements of pre-service training through individualized competency-based courses. Such courses should minimize face-to-face contact. Arrangements should be made with the local AVTS to accommodate the classroom components in secondary and/or post-secondary settings.

   These programs can be made more accessible by using an appropriate mix of training locales and delivery mechanisms. Consideration should be given to such factors as the number of persons to be trained, geographic distribution of trainees, availability of trainees as related to work schedules, use of joint pre- and in-service training, and availability of classroom settings for completing the competency-based courses requiring such setting. Input and output of the VEPS should provide considerable information for pre-service program planning and execution.

5. Pre-service courses must be offered at times convenient for trades practitioners. Since most tradespeople are employed during the day, evening or Saturday courses are recommended. Demand factors should be considered when determining the frequency of presentation. If the individualized competency-based approach is used, the question of frequency is no longer a factor.

6. It is recommended that the Penn State five-year trade/industrial program be studied to determine whether and how the trade competency aspect should be strengthened. Such study should start with an examination and evaluation of the performance of graduates of this program in the AVTS system. Such review should serve to identify real and potential weaknesses to be addressed in subsequent modifications of the program. Thus, problem identification and definition would precede, and dictate to some extent, the corrective actions.

7. In an effort to increase enrollment in pre-service courses, awareness programs of the teaching alternatives and requirements should be implemented as suggested in Section V, Vocational Education Awareness. Further, incentives need to be developed which will encourage individuals to obtain pre-service training. These incentives are discussed in Section VI, Incentive Programs.

8. It is recommended that the BVE develop a statement of pre-service training policy. This statement should embrace such measures as:

   - the Commonwealth's stance as to the desireability and appropriateness of pre-service training,
   - general criteria as to content of the program,
   - the nature and extent of financial support for such programs. The State support should include application of awareness and incentive programs. Further, the State should delegate to the Centers the responsibility and authority for program development and implementation. Existing programs should be utilized to the fullest extent possible.

   The role of Centers is to:

   - provide pre-service awareness and incentive programs
   - develop and implement vocational education pre-service programs consistent with demand factors
   - work with AVTSs on recruitment of potential teachers
   - promptly register pre-service students in the VEPS.

TEACHER CERTIFICATION AND COMPETENCY

The findings of this portion of the study indicate several aspects related to certification and teacher competency need to be addressed. These areas include: requiring some degree of pedagogical skills prior to entering the classroom, time frame for completing the VI I and II levels of certification, and assuring maintenance of trade and pedagogical skills after initial competency assessment. To address the above concerns, it is recommended that:

1. The one-week orientation programs designed by the Centers should be mandatory for all beginning teachers who have had no pedagogical training. Also, orientation training should be eligible for credit toward certification. This would insure that all beginning teachers have some degree of pedagogical skills prior to entering the classroom. In addition, this would reduce the amount of non-credit training and at the same time help to shorten the time frame for acquiring certification.

2. Present requirements for the Vocational Instructional II certificate should be critically evaluated to determine whether the present 60 credits are appropriately addressing the classroom needs of vocational education instructors. Consideration should be given to the development of a more defined structure of specific tasks to be completed and the possibility of modifying the number of credits required.

3. In addition to certification requirements, a provision for on-going maintenance of trade and pedagogical competency is needed. This should be accomplished through requiring a specific number of continuing education hours be completed within a specified number of years (i.e. accounting profession requires forty hours per year). If the continuing education requirements are not met, certification should be suspended or revoked. The importance of this on-going continuing education requirement has been recognized by several other professions, such as the accounting, medical, and legal professions.

4. Workshops, seminars, and other training programs, approved by the PDE, designed for updating trade competencies should be applicable toward the continuing education requirements stated in recommendation 3 above.

5. Reciprocity should be granted for successful completion of NOCTI examinations taken in other states.

6. The awareness programs of the teaching alternative should include information on the orientation programs and the continuing education requirements proposed in recommendation 3 above.

   In addition, use of incentives should be considered, in accordance with supply/demand factors, for attainment of these programs.

7. The BVE's role should include:

   - establishing a task force to evaluate the present requirements for the VI II to determine:
     - whether present courses can be redesigned to focus more specifically on pedagogical skills required in the classroom
     - whether credit requirements for certification can be modified as a result of course redesign and/or continuing education requirements
   - setting the general criteria for content of orientation programs
   - a statement on the Commonwealth's stance as to the desirability and appropriateness of continuing education requirements to include:
     - development of general criteria for content of continuing education
     - responsibility and authority for developing and implementing continuing education courses, workshops and seminars
     - determination of the nature and extent of funding to support continuing education
   - developing and implementing the continuing education requirements within a one-year time frame

8. The Centers' role should include:

   - participation in the evaluation of the VI II certification requirements
   - a joint effort to develop standards and requirements for the orientation program
   - development of courses, workshops and seminars to meet State guidelines for the continuing education requirements.

9. The role of AVTSs should include:

   - participation in the review and evaluation of existing orientation programs and VI I AND VI II certification requirements
   - providing input as to content of:
     - orientation programs
     - requirements for certification
     - continuing education programs
   - consideration of use of incentives consistent with supply/demand factors.

MANAGEMENT PLAN

VOCATIONAL EDUCATION PERSONNEL SYSTEM

RECOMMENDATIONS	RESPONSIBLE ENTITY	TARGET DATE
LABOR MARKET NEEDS ANALYSIS		
• A model labor market needs analysis system should be designed which, with minimal local adaptations, would provide information required by AVTSs to plan their respective vocational educational programs and at the same time furnish data useful to the Centers and the PDE for developing teacher training policies and programs	PDE - Policy, direction of development effort, funding OTHERS - Centers, AVTSs, industry labor, associations, etc. - input as to information needs, data collection mechanisms, comprehensive/special scope, annual/cyclical, test, etc.	Draft - 12/81 Test - 6/82 Implement- on-going commencing 7/82
• The Centers and the PDE should provide implementation advisory/consultative services and the PDE should consider funding such assistance	PDE - Policy, general direction, monitor, funding CENTERS- provide localized services	On-going commencing 7/82

RECOMMENDATIONS	RESPONSIBLE ENTITY	TARGET DATE
VOCATIONAL EDUCATION PERSONNEL SYSTEM		
First phase		
• Develop and implement an awareness program	See Vocational Education Awareness	--
• Modify certification requirements	See Teacher Certification and Competency	—
• Develop enhancements for Indiana's in-service tracking and placement system and extend its use to all Centers •• Establish pools of qualified individuals based on geographical regions served by Centers •• Use the Indiana system for storage and retrieval of information •• Enhance systems to include historical turnover data, potential teacher registration data and data re current openings •• Register pre-service trainees •• Register AVTS graduates evidencing interest in teaching •• Register present VE teachers desiring change •• Provide capability to search on local, regional and state-wide basis •• Provide capability for personnel management information reporting •• Develop and distribute information on capability and availability of VEPS	PDE - Authorize, fund and provide general oversight to system development, use management reports for program planning Indiana - Design, program and implement EDP aspects of VEPS CENTERS - Advise and consult throughout system development, provide data entry services, provide inquiry and referral services, use information for program planning AVTSs and OTHERS - Provide source data to establish and maintain files, access data through Centers	Authorize - 6/81 on-going commencing 7/82 Implement - on-going commencing 7/82
Second phase - To be implemented if first phase fails to provide quantity and quality of teachers desired:		
•• Establish and/or extend incentive programs	See Incentive Programs	
•• Establish and/or extend pre-service training programs	See Pre-Service Training	

RECOMMENDATIONS	RESPONSIBLE ENTITY	TARGET DATE
VOCATIONAL EDUCATION AWARENESS		
• Prepare and disseminate awareness program materials and information reflecting state-wide opportunities in vocational education, pre- and in-service training programs, requirements for pursuing the teaching alternative, incentives and benefits	PDE - Policy, develop state-wide stragey, develop state level program, coordinate state/centers/local efforts	On-going commencing 7/81, initial releases 12/81
• Prepare and disseminate awareness program materials and information directed toward enrolling individuals in pre- and in-service training programs and targeted for curricula areas of greatest demand	CENTERS - Strengthen programs re teaching alternative, pre-service opportunities, hard-to-fill curricula	On-going commencing 7/81, main effort for 82-83 school year
• Provide advisory services for AVTSs on development and implementation of local awareness programs	CENTERS - Define and disseminate materials re available services	On-going commencing 7/81, initiate services 9/81
• Disseminate materials developed by the BVE and Centers, give emphasis to the teacher career alternative in locally developed materials, presentations and student tracking activities, incorporate guest speakers from industry in teaching plans, provide information to VEPS re vacancies, turnover, registry of potential teachers, etc.	AVTSs - Develop local policy, plan program for 81-81, develop specific materials and presentations emphasing alternative, involve labor and industry	On-going commencing 7/81, initial effort by 12/81

RECOMMENDATIONS	RESPONSIBLE ENTITY	TARGET DATE
INCENTIVE PROGRAMS		
• Include information pertaining to pre- and in-service incentive and benefit programs in awareness materials and presentations	PDE, Centers, AVTSs	On-going commencing 7/81
• Use pre-service incentives based on supply and demand factors at a given point in time	PDE - Policy, define state level programs, implement state programs	In place by 12/81, subsequent application as needed
	AVTS - Policy, define local programs, implement state/local programs	In place by 12/81, subsequent application as needed
• Monitor the use of incentives to determine their impact on the quantity and quality of instructional staffs	PDE - Compile data, issue reports, initiate incentive activities	Mechanism in place by 12/81
	AVTS - Prepare and submit reports	Report commencing 1/82

RECOMMENDATIONS	RESPONSIBLE ENTITY	TARGET DATE
PRE-SERVICE TRAINING		
• Modify the Intern certificate to require satisfactory completion of a pre-classroom orientation program for persons having no other pre-service pedagogical qualifications	PDE - Policy, effect certificate change	1/82 to be effective school year 82-83
• Strengthen orientation programs through awareness and recruitment programs, more timely hiring, timely and accessible offerings, pay and expense status, credit toward certification	PDE - Approve credit toward certification CENTERS - Support awareness, joint development of orientation training, mechanisms for timely/accessible training AVTSs - Require pre-service training orientation, use awareness program, apply incentives if needed	Development activity by 1/82, implement for school year 82-8
• Develop a statement of pre-service training policy for guidance of PDE, Centers and AVTSs	PDE - Prepare and issue statement	1/82
• Develop individualized competency-based program to meet requirements for VI-I	CENTERS - Joint development of training content	In place for 82-83 school year
• Make pre-service non-degree training programs more accessible and offer pre-service courses at times convenient for trades practitioners	CENTERS - Planning and scheduling AVTSs - Encourage training through awareness and incentive activities	In place for 82-83 school year
• Evaluate the Penn State five-year trade/industrial degree program to determine whether and how the trade competency aspect should be strengthened	PDE - study and report findings and recommendations	1/82

RECOMMENDATIONS	RESPONSIBLE ENTITY	TARGET DATE
TEACHER CERTIFICATION AND COMPETENCY		
• Requirements for the VI-II certificate should be evaluated to determine whether the 60 credits are appropriately addressing the needs of vocational education instructors	PDE - Direction CENTERS - Joint evaluation team, prepare report and recommendations AVTSs - Represented on evaluation team	Report 1/82 corrective action if needed 1/83
• Establish continuing education requirements to maintain trade and pedagogical competencies, including provision for suspension or revocation of certification for failure to meet requirements	PDE - Policy, develop program guidelines, approvals, design and install records system	Program authorization 1/82 Program implementation 1/83
• Provide continuing education credit for PDE approved workshops, seminars and other training programs designed for updating trade competencies	PDE - Develop approval procedure, maintain records system	Operational 1/83
• Develop reciprocity agreements with other states for successful completion of NOCTI examinations	PDE - Contact other states, negotiate agreements	Bordering states 1/82, others 1/83

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FINAL REPORT

THE ESTABLISHMENT OF A VOCATIONAL EDUCATION PERSONNEL SYSTEM TO ASSIST IN THE INSTRUCTIONAL STAFFING OF VOCATIONAL-TECHNICAL PROGRAMS

(Contract Number~~s~~ ~~83-9822~~ and 83-0801)

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FOR VOCATIONAL EDUCATION

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ABSTRACT

CONTRACTS 83-9822 and 83-0801: Vocational education personnel system to assist in instructional staffing of vocational technical programs

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$9,022 Federal
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The purpose of the project was to design a state-wide system for establishing regional pools of qualified teachers for potential staffing of local vocational training programs. Such resource pools will be available primarily to administrators of vocational education programs at secondary schools.

OBJECTIVES:

The objectives were to facilitate recruitment and retention of qualified vocational education instructional staffs by providing mechanisms which would allow for:

- creation of awareness among tradespeople of the teaching alternative and its requirements
- development of pre-service training programs which would be readily available to serious aspiring candidates while still employed in their trade
- identification of a pool of qualified individuals available for regular or substitute teaching
- strengthening of public confidence in vocational technical teacher pedagogical skills
- development of a better relationship between industry and the vocational technical schools
- provision of more definite guidelines for the outreach services of teacher education

OUTCOMES:

This project was accomplished primarily through a comprehensive data collection effort with participants from area vocational-technical schools, labor and industry organizations, vocational education personnel development centers and, vocational education programs of other states. A project advisory committee reviewed and commented on methodology, findings, conclusions and recommendations.

A report was presented to the Pennsylvania Department of Education providing recommendations for a comprehensive and integrated vocational education personnel system incorporating features for:

- labor market needs analysis
- people/position matching
- personnel management information reporting
- vocational education awareness
- incentives and benefits
- pre- and in-service training
- teacher competency and certification.

AUDIENCE:

The project report provides the basis for action programs to be developed and implemented by the Pennsylvania Department of Education, the vocational education personnel development centers (Indiana University of Pennsylvania, The Pennsylvania State University, University of Pittsburgh and Temple University) and the directors of local vocational education training programs for the purpose of strengthening the vocational education instructional staffs of secondary schools.

PUBLICATION

Final report: "The Establishment of a Vocational Education Personnel System to Assist in the Instructional Staffing of Vocational-Technical Programs"

VOCATIONAL EDUCATON PERSONNEL SYSTEM

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APPENDICES

I. DATA COLLECTION MECHANISMS

II. CONTRIBUTORS

I. INTRODUCTION

INTRODUCTION

In February 1980, the Pennsylvania Department of Education (PDE), Division of Research Coordinating Unit for Vocational Education, issued a request for proposal (RFP) for the design of a state-wide system for establishing regional pools of qualified teachers for potential staffing of local vocational training programs. The RFP was initiated as a result of vocational technical teachers, especially in the trade and industrial areas, entering the classroom with few pedagogical skills and a seven-year timetable to acquire these skills.

According to PDE estimates, each year approximately ten percent of the incumbent teachers in vocational education leave the profession. Local administrators then begin their search to identify possible candidates for these vacancies. Once a potential teacher is identified, the lengthy process begins to test trade competency and obtain pedagogical training to become a qualified teacher. To alleviate these problems, a system was to be designed which would allow for the following:

- creation of awareness among tradespeople of the teaching alternative and its requirements
- development of pre-service training programs which would be readily available to serious aspiring candidates while still employed in their trade
- identification of a pool of qualified individuals available for regular or substitute teaching
- identification of program areas of hard-to-fill positions
- strengthening of public confidence in vocational technical teacher pedagogical skills
- development of a better relationship between industry and the vocational technical schools
- provision of more definite guidelines for the outreach services of teacher education.

Laventhol & Horwath (L&H) considered the problem of teacher shortages in area vocational-technical schools (AVTS) as a management problem brought on primarily by deficiencies in the information base upon which positive action programs can be built and by the slowness with which the trade/industrial and the educational system have responded to the need for both problem definition and resolution. A systems approach consisting of the following major tasks was used to address the problem:

Task I	Orientation and Planning
Task II	Fact Gathering
Task III	Analysis
Task IV	Conclusions and Recommendations
Task V	Presentations and Report
Task VI	Management Plan

These six tasks are explained in more detail in Section II, Methodology.

A personnel information system designed to facilitate recruitment and maintenance of appropriately qualified vocational instructional staffs cannot function solely as a mechanism for matching jobs and people but must be a comprehensive system embracing many elements. In addition to a matching mechanism, these elements should include:

- labor market needs analysis
- personnel management information reporting
- vocational education awareness
- incentives and benefits
- pre- and in-service training
- teacher certification and competency.

These elements are discussed in various sections of this report. However, a brief discussion of the contributions of the parts to the whole system follows. In addition, a flow chart of the proposed system is presented in Section IV, Vocational Education Personnel System, page IV-2.

To be effective, the total, integrated system should begin with a regular flow of labor market needs analysis information to serve the multiple needs of AVTSs, Centers and the PDE. This information, when supplemented by turnover, vacancy and student tracking data, provides a base for job/people matching and personnel management information useful for program planning at all levels.

An aggressive awareness program placing some emphasis on the teaching alternative, requirements for teaching, incentives and benefits can serve to identify and interest persons for potential careers in teaching.

Incentives and benefits available on a pre- and/or in-service basis may serve to encourage persons to consider the teaching alternative.

Enrollment in pre-service training programs, with or without incentives, would serve to expand the pool of potential teachers. Likewise, adjustments in requirements for certification and maintenance of trade and pedagogical competencies can have favorable impact on the quantity and quality of would-be vocational education teachers.

These elements must be considered in relation to their impact on each other and the extent to which these components are used should be related to the labor market supply/demand conditions at a given time and place.

Recommendations for the design and implementation of a total, integrated system are based largely on redirection of present efforts and modification and enhancement of existing systems. Thus, the cost to implement recommendations should be relatively low and benefits should be substantial.

While this project was directed toward problems associated with the instructional staffing of AVTSs, similar circumstances may exist in the vocational education component of comprehensive secondary schools. Thus, it is suggested that such schools participate in the improvement programs recommended in this report.

Throughout this report acronyms have been used instead of full titles. For ease of reference, they are listed below:

AVTS	Area Vocational-Technical School
BVE	Bureau of Vocational Education
Centers	Vocational Education Personnel Development Centers
Indiana	Indiana University of Pennsylvania
L&H	Laventhol & Horwath
NOCTI	National Occupational Competency Testing Institute
PDE	Pennsylvania Department of Education
Penn State	The Pennsylvania State University
Pitt	University of Pittsburgh
RFP	Request for Proposal
Temple	Temple University
VEPS	Vocational Education Personnel System

II. METHODOLOGY

METHODOLOGY

The study was divided into two major phases:

- Phase I - Orientation and Planning
- Phase II - Conduct of Project

PHASE I - ORIENTATION AND PLANNING

Task I, Orientation and Planning

Phase I, Task I, was divided into thirteen sub-tasks which were intended to aid L&H in assuring agreement and understanding of the problem as presented in the RFP, identifying the organizations associated with the objectives of the study, ascertaining the general role and relationships of such organizations, identifying and obtaining the relevant authoritative bases, obtaining readily available pertinent documentation and establishing the ground rules and logistical support for conduct of the engagement.

Preliminary data were obtained through personal and telephone contacts with representatives of various Commonwealth departments, labor and industry organizations and AVTSs. Two products resulted from Phase I:

- a definitive plan for data collection
- establishment of a project advisory committee.

PHASE II - CONDUCT OF PROJECT

Phase II, consisted of Tasks II-VI identified in the above INTRODUCTION. The methodology used to carry out these tasks follows.

Task II, Fact Gathering

The objectives of this task were to identify and define the current status of activities which impact on or have significant interest in vocational education and to elicit comments and suggestions for strengthening vocational education efforts. During this task, mechanisms were developed to collect and record the data elicited through interviews, field visits, and mail surveys. These data collection mechanisms included:

- AVTS Questionnaire
- AVTS Teacher Questionnaire
- Interview Guidelines - Advisory Councils/Craft Committees
- Interview Guidelines - Labor/Industry
- Interview Guidelines - Vocational Education Personnel Development Centers

A brief summary of each of these data collection mechanisms follows. Samples of each mechanism can be found in Appendix I. Also, Appendix II lists persons and/or organizations who participated in the study.

AVTS Questionnaire

The major data collection mechanism used was a questionnaire furnished to the directors of all AVTSs. Fifty-four (75%) of the seventy-two AVTS directors, representing seventy-nine AVTSs responded to the questionnaire. This level of participation is indicative of the interest and concern of AVTS directors with problems related to the quantity and quality of instructional staffs serving the vocational education program.

The AVTS Questionnaire addressed the following areas:

- Labor market analysis
- Staffing
- Incentives
- Teacher certification and competency
- Vocational education awareness
- Student tracking

Responses were obtained through on-site visits to thirteen AVTSs and via forty-one mail replies. In the instances of field visits, responses of the directors were supplemented by discussions with representatives of advisory councils, craft committees, industries and unions when such could be arranged; also, a few responses were mailed in by those groups. While data from these related entities are somewhat limited, they tend to support responses provided by directors.

This grass-roots participation by AVTSs and related entities provided a substantial body of data from which findings were identified, conclusions drawn, and recommendations developed for action programs.

AVTS Teacher Questionnaire

To determine how new AVTSs meet staffing requirements and to obtain some teacher input to the study, the trade/industrial teachers of six new or recently expanded AVTSs were surveyed. Twenty (27%) of the seventy-three teachers responded to the questionnaire.

The AVTS Teacher Questionnaire requested information relative to:

- Age
- Certification
- Motivation and recruitment
- Teacher training
- Participation in a personnel system.

Responses were obtained through mail questionnaires. Participants cannot be listed since they were asked to reply anonymously.

Interview Guidelines - Advisory Councils/Craft Committees

During field visits to AVTSs, information was obtained through discussions with representatives of advisory councils and craft committees. Interviews were conducted with eleven advisory council representatives and thirteen craft committee representatives. While data from these councils/committees are somewhat limited, it tends to support responses provided by directors.

The Interview Guidelines addressed the following areas:

- General - composition and functions
- Labor market analysis
- Vocational education instructional staffing
- Teacher certification and competency
- Student competency
- Vocational education awareness
- AVTS responsiveness to recommendations.

Interview Guidelines - Labor/Industry

Information was obtained from labor and industry representatives through interviews conducted in conjunction with AVTS field visits and telephone interviews. Seven labor representatives provided input; 5 through AVTS visits and 2 through telephone interviews. Eleven industry representatives also provided input; 5 through AVTS visits and 6 through telephone interviews.

The Labor/Industry Interview Guidelines addressed the following areas:

- Relationship to AVTS
- Needs analysis
- Council/committee roles
- Student competency
- Instructional staffing
- Vocational education awareness.

Interview Guidelines - Vocational Education Personnel Development Centers

Interviews and telephone conversations with directors and/or other representatives of the four Centers provided input to the study.

The interview guidelines addressed the following areas:

- Function
- Labor market needs analysis
- Curricula
- Teacher certification and competency
- Vocational education awareness
- Statistical data
- Personnel systems.

In addition to using the above data collection mechanisms, numerous contacts were made with Federal agencies, various research centers and other states in an effort to identify previous efforts having relevancy to this project. Also, many persons in the PDE were consulted throughout the data collection task.

Task III, Analysis

Responses to the questionnaires and interview guidelines were tallied for each of the mechanisms. The results from each mechanism and other documentation received during Tasks I and II were analyzed by topic to identify and summarize significant findings. During the process of analysis and evaluation of data, it was necessary to conduct additional fact gathering to clarify information and fill voids where information was insufficient. After all additional fact gathering, tentative conclusions and recommendations were developed.

Task IV, Conclusions and Recommendations

The tentative conclusions and recommendations determined in Task III were re-evaluated, revised and prepared for presentation to the VEPS Advisory Committee. The presentation, a draft of the project report, was for review, consideration and comment by the Committee.

Task V, Presentations and Report

After presentation of the draft report to the VEPS Advisory Committee, the Committee's input was reviewed and considered in the development of final conclusions and recommendations. Changes were reviewed with representatives of the PDE and the final report was prepared and presented to the PDE.

Task VI, Management Plan

As a separate component of the project, a management plan or executive summary was prepared and submitted to the PDE. This plan/summary provides an overview of recommended actions, identifies organizational responsibility for implementation, and provides estimated time requirements for completing actions.

III. LABOR MARKET NEEDS ANALYSIS

LABOR MARKET NEEDS ANALYSIS

INTRODUCTION

Labor market needs analysis was the first subject addressed in the AVTS Questionnaire and it was included in discussions with various parties throughout the data collection activity. This indicates the importance attached to such analyses as the means for obtaining basic data essential to effective planning and implementation of vocational education programs. With provision of marketable skills being the primary mission of the AVTS system, it is essential to perform appropriate needs analyses to be able to respond to such questions as:

- What skills are needed to supply labor market needs for the area served by the AVTS?
- What level of skill is deemed appropriate to meet requirements for entry into the job market: that is, what are the qualitative demands?
- What is the projected need for various skill areas so as to meet quantitative demands of the job market?
- What subjects and attributes other than trade skill per se do potential employers consider to be important?
- What are the implications for teacher needs as reflected by the analyses?
- What are the significant changes in technology and methodology which should be reflected in curricula, equipment and facility changes?
- How can relationships among AVTSs, employers and unions be strengthened so as to enhance the effectiveness of the AVTSs?

FINDINGS

AVTS QUESTIONNAIRE

A component of the AVTS Questionnaire elicited information pertaining to the conduct of labor market needs analyses and the use of results to enhance effectiveness of vocational education programs. The specific questions were:

1. Has a survey of labor market needs been performed in the last: year, 2 years, 3 years, other __ years?
2. How frequently is this survey updated?
3. Who performs the survey?
4. How are the results of the survey used to respond to labor market needs?

Fifty-two directors responded to the question pertaining to recency of surveys. Of these directors, 28 (54%) indicated that a labor market needs survey was performed within the last year or two and 23 (44%) indicated three or more years since the last survey. Only one director indicated that no surveys had been performed. Tabulation of responses to this question follow:

RECENCY OF LABOR MARKET NEEDS SURVEY

PERIOD	NUMBER OF RESPONSES	PERCENT	PERIOD	NUMBER OF RESPONSES	PERCENT
1 year	21	41	Over 7 years	1	2
2 years	7	13	As needed	2	4
3 years	13	25	Never	1	2
4-7 years	7	13			

TOTAL RESPONSES 52

Responses to the question on frequency of survey update reflected considerable variation in the efforts to maintain currency of the labor market data. Of the 47 directors responding to the question, 20 (43%) indicated the survey is performed annually or bi-annually, 22 (47%) indicated update occurring at any time from three years to "as needed", and 5 (10%) reported no updates or in the process of developing programs. Following is the tabulation of responses to this question:

FREQUENCY OF LABOR MARKET NEEDS SURVEY UPDATE

PERIOD	NUMBER OF RESPONSES	PERCENT	PERIOD	NUMBER OF RESPONSES	PERCENT
Annually	12	26	As needed	10	21
Bi-annually	8	17	Developing programs	2	4
3-5 years	9	20	Never	3	6
Ongoing but not formal	3	6			

TOTAL RESPONSES 47

Responses to the question, "Who performs the survey?" indicate that various parties participate in labor market analyses. Of the 54 responses, 36 directors indicated that the AVTS staff either performed the survey or performed it in conjunction with others. Major sources of assistance were the AVTS advisory councils and craft committees. Studies were performed by outside consultants in six instances. Information developed by other public and/or private sector organizations served as input to the determination of labor market needs. The tabulation of responses to this question follows:

LABOR MARKET NEEDS SURVEY PERFORMED BY

PARTICIPANT	NUMBER OF RESPONSES	OTHER PARTICIPANTS
AVTS Staff	36	Other: • Bureau of Employment Security • County Government • CETA • Manufacturer's Association • Chamber of Commerce • IU Units • Economy League • Private Industry Council • Manpower Office
AVTS Advisory Committee	15	
AVTS Craft Committee	11	
Outside Consultant	6	
TOTAL RESPONSES	77*	

*The responses are greater than the number of respondent AVTSs since some survey activity involved participation by more than one entity.

Directors indicated that results of surveys are used for multiple purposes. The most frequently cited purposes were: to modify course content, to add or delete curriculum, for long-range planning, to modify equipment and/or facilities, and for student counseling. Following is the tabulation of responses to this question:

USES OF LABOR MARKET NEEDS ANALYSIS DATA

USE	NUMBER OF RESPONSES	USE	NUMBER OF RESPONSES
Modify course content	42	Change instructional staffing	16
Add or delete curriculum	41	Provide public information programs	13
Develop long-range plans	35	Other: • CETA ◦ Placement • Co-op programs	
Modify facility and/or equipment	31		
Counsel students	27		

TOTAL RESPONSES 208*

*Responses are greater than the number of respondent AVTSs since most Directors indicated multiple uses of survey data.

Comments offered by AVTS directors during field visits indicated that labor market needs analyses are inadequate to provide data appropriate for program planning and decision making. While comprehensive surveys were undertaken to support establishment of AVTSs, subsequent efforts have been spotty both in terms of substance and frequency. Survey weaknesses identified by the directors included:

- Surveys are not performed regularly so as to provide continuity of information reflecting changes and trends
- Informal conversational contacts are used to obtain labor market data rather than planned, structured and systemized mechanisms
- Some analyses are performed to support an already perceived specific need rather than to obtain data which would provide bases for the identification of needs.

In the AVTS Questionnaire, the directors were asked to project instructional staff requirements. Nearly half of the directors responded that they had no idea of projected need or were unable to project need.

OTHER SOURCES OF FINDINGS

AVTS Advisory Councils/Craft Committees

The labor market needs analysis information received from advisory councils and craft committees showed different results than the information received from labor/industry discussed below. Most respondent advisory council members believed that the AVTSs were using some form of labor market needs analyses. Some advisory council members indicated that the AVTSs use labor market analysis data prepared by other entities such as the State Bureau of Employment Statistics. Others indicated the analyses were done on an informal basis. Most craft committee members agreed that surveys were being used but did not know who was performing them or how formalized they were.

Five of ten advisory council members indicated they participate in the analyses. The extent of participation varied from informal observation of community needs to actual formating of questionnaires and tallying of results. Most responses indicated an informal rather than a formal role. Very few craft committee members indicated they participate in the labor market need analyses and the few members who do participate indicated it is on an informal basis.

Most advisory council members were uncertain as to when the last labor market analyses was performed and how frequently it is updated. The few members who knew indicated it was performed within the last year and one indicated it was performed 3 years ago. Most analyses were updated annually, and one was updated bi-annually. One respondent indicated annual update of selected programs on a rotating basis.

Advisory councils and craft committees indicated that labor market analyses are used by schools for several reasons. The most common use is to change curriculum offerings through the addition and/or deletion of programs. Other uses cited frequently were to change course content, evaluate facilities and/or equipment, and for input school student counseling.

The data provided did not indicate significant roles by either advisory councils or craft committees in the labor market needs analysis activity.

Labor Union/Industry Representatives

None of the labor representatives indicated participation in labor market analyses and only four of twelve industry persons knew of any participation by their firms. Participating industries indicated they try to give the AVTS information on qualifications and number of persons needed.

Most labor/industry representatives indicated they do not participate in labor market analyses. One positive response indicated the latest annual survey was performed in 1979.

Few respondents addressed the question on use of survey results by industry. The few responses received indicated industry uses survey results as input for determining the nature and extent of job training they will have to provide.

From the limited responses it appears that labor and industry have had minimal roles in labor market needs analysis efforts.

Vocational Education Personnel Development Centers

The labor market needs analyses performed by the Centers are oriented toward determining the future need for vocational education teachers.

Forms of labor market needs analysis being performed by the Centers include: as mandated by State contract, "simple surveys" of vocational teachers to assess future instructional needs, surveys of AVTS directors to determine the areas where teachers will be needed, and use of VEMIS retirement data to project curricula areas of teacher need.

The purposes of the "simple surveys" conducted by Centers are to collect information necessary for the design of systematic staff development programs and to provide data for pedagogical workshops and field assistance programs for beginning teachers. These surveys are sent to all vocational education teachers in both vocational-technical and comprehensive schools within each Center's jurisdiction. Also, three Centers, Pitt, Penn State and Temple, indicated they conduct surveys of AVTS directors to determine projected teacher needs.

Labor market analysis information is obtained from the Pennsylvania Department of Education, Division of Vocational Education Planning and Financial Management, and the Division of Educational Statistics. Most of this information pertains to retirement data which are used to determine curricula areas where teacher replacements will be needed.

Centers indicated that accurate needs assessment data for vocational teachers are not readily available. Penn State recommended that guidelines and "how to" information be developed by the State Department of Education or the Centers to assist directors in obtaining teacher need data.

CONCLUSION

Labor market needs analyses, as presently performed, do not provide data essential for effective program planning and the development of vocational education programs to meet requirements of local labor markets.

RATIONALE

Survey data indicate that labor market needs analyses are not performed regularly, that advisory councils and craft committees do not play major roles in the design and conduct of analyses, and that labor and industry representatives neither were aware of nor played significant roles in the labor market needs analyses activity.

When asked to project instructional staff needs, nearly half of the AVTS directors indicated they had no idea or were unable to project need. This would indicate that labor market data are inadequate to identify the trades area where jobs for students are most likely to be available and thereby provide information for curricula development and projection of teacher needs.

RECOMMENDATIONS

Data obtained through labor market needs analysis should provide much of the foundation for AVTS program planning and decision making essential to development and implementation of effective vocational education programs. If AVTSs are to accomplish their primary mission of providing students with marketable skills, actions to fulfill such mission should be based on valid and reliable data reflecting the labor market needs of the area served by each AVTS. Needs are not static, thus there should be continuity of needs analysis efforts to be responsive both in terms of substance and timeliness of training.

To facilitate the development and implementation of appropriate labor market needs analysis programs, it is recommended:

1. A model labor market needs analysis system should be designed which, with minimal local adaptations, would provide information required by AVTSs to plan their respective vocational educational programs and at the same time furnish data useful to the Centers and the PDE for developing teacher training policies and programs. The model should consider such factors as:

    ◦ responsibility for the needs analysis effort and identification of participants and their roles (i.e. advisory councils, craft committees, industry, labor, etc.)

    ◦ intended purposes and uses of information (i.e. student counseling, curricula revision, equipment and facility modernization, pre- and in-service teacher training, awareness and incentive programs, operating and capital budget planning etc.)

    ◦ specific data requirements (i.e. industry indentification, trade identification, skill level requirements, desired personal attributes, projected job openings, strenghths and weaknesses of VE graduates in the work force, etc.)

    ◦ potential sources of relevant data

    ◦ forms and procedures for data collection and analysis/evaluation

    ◦ intended distribution of survey forms and instructions (i.e. comprehensive, selected industries, selected trades, etc.)

- analysis/evaluation of survey data including relationship to turnover, vacancy, student interest and other data
- furnishing data to Centers and the PDE
- decision making as to courses of action
- planning, scheduling and implementing changes

2. The model should be developed under the auspices of the PDE with input from the Centers, AVTSs, labor, industry, professional and trade associations, etc. The model could be developed in-house or through a consultant contractual arrangement.

3. The model should be tested before being made available state-wide.

4. The model should be designed with sufficient flexibility to permit use on either an annual or cyclical basis. A cyclical plan should require that each curriculum be surveyed at least every three years.

5. Since data would also be made available to the Centers and the PDE, the Centers and the PDE should provide implementation advisory/consultative services and the PDE should consider funding such assistance.

COST/BENEFIT ANALYSIS

The present approaches to labor market needs analysis are discretionary, with each AVTS determining whether any analysis should be undertaken. If so, each AVTS proceeds to develop and implement its own mechanisms, both formal and informal, for accomplishing the analysis. Without appropriate guidelines for conducting needs analysis, the results of present practices may or may not be reflective of changes and responsive to community needs. Further, little if any data are furnished for use by the Centers and the PDE for program planning and development purposes.

Funds used to develop analysis programs are wasted to some extent due to the "shot-gun" approach of each AVTS proceeding independently. A model program could serve to reduce both development and implementation costs through centralized development, largely standardized forms and procedures, tailoring of the model to local requirements, potential application of computer technology, and increased use of the data.

IV. VOCATIONAL EDUCATION PERSONNEL SYSTEM

VOCATIONAL EDUCATION PERSONNEL SYSTEM

(VEPS)

INTRODUCTION

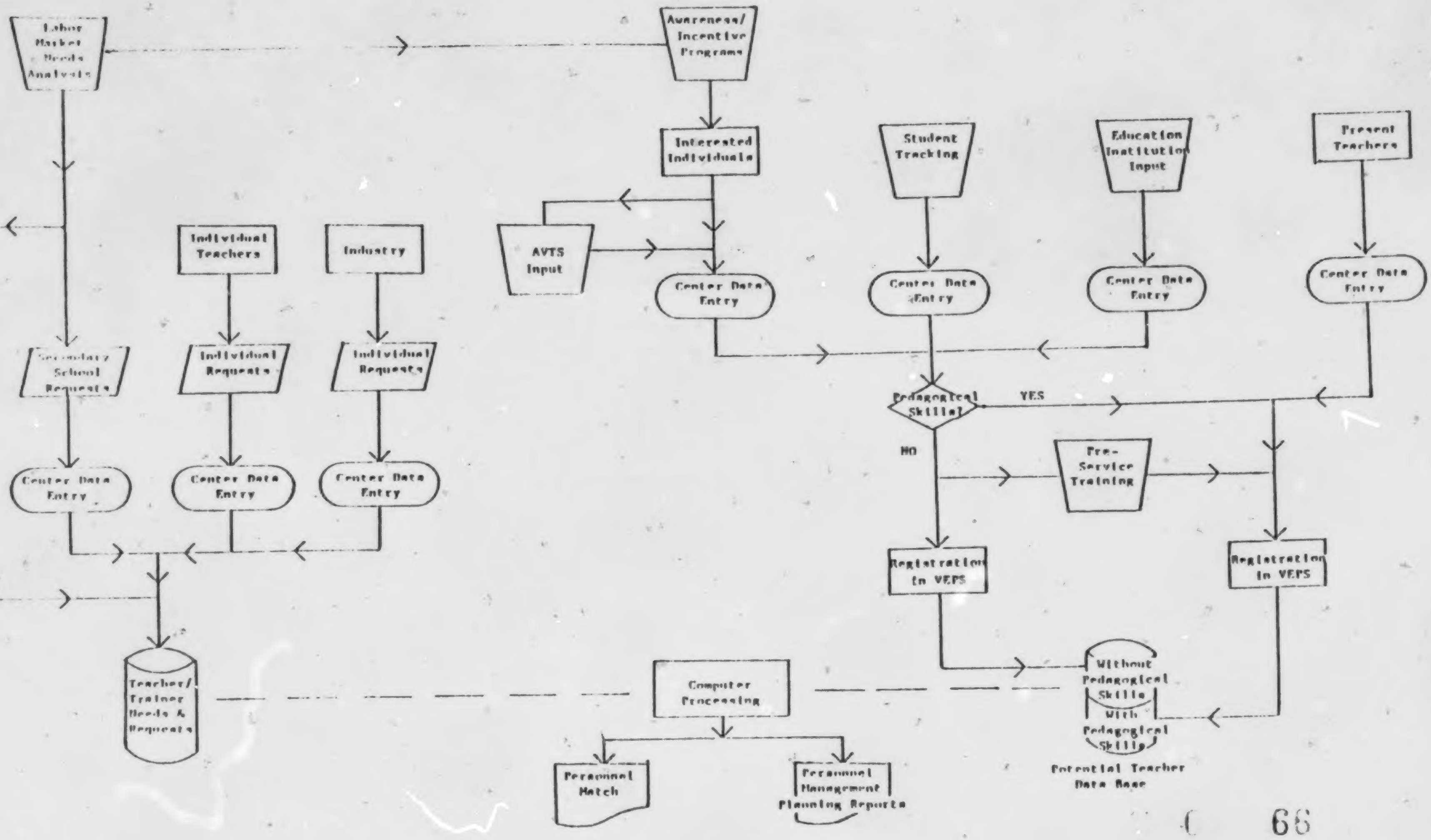
The major concern presented in the request for proposal (RFP) issued by the Department of Education pertained to the establishment of a personnel information system to identify qualified teachers for potential staffing of local vocational training programs. Laventhol & Horwath's (L&H) efforts were directed toward:

- establishing the nature and extent of need for teachers; particularly for the trade/industrial areas
- determining the essential ingredients of a personnel information system
- providing a personnel information system concept which, upon implementation, should facilitate recruitment and maintenance of appropriately qualified vocational instructional staffs.

To accomplish the objective, L&H utilized the approach presented previously in the Methodology section of this report. Analyses and evaluations of data indicated that neither past experience of teacher turnover nor the projection of teacher needs justify the design and implementation of a new state-wide system of regional pools of qualified teachers. Rather, existing systems, although designed primarily to track in-service training and for placement of graduating students, are capable of modification and enhancement which should provide information for an effective vocational education personnel system (VEPS).

A VEPS cannot stand alone. It must be supported by appropriate awareness, incentive and pre-service programs as discussed in later sections of this report. Further, an effective VEPS is dependent upon an on-going flow of input from AVTS directors, post-secondary and higher education institutions, industry, labor organizations, and other sources identified as potential contributors to the system. A VEPS system overview is presented on the following page.

VOCATIONAL EDUCATION PERSONNEL SYSTEM
(VEPS)


Labor Market Needs Analysis
Awareness/ Incentive Programs
Interested Individuals
AVTS Input
Center Data Entry
Student Tracking
Education Institution Input
Present Teachers
Center Data Entry
Center Data Entry
Center Data Entry
Individual Teachers
Industry
Secondary School Requests
Individual Requests
Individual Requests
Center Data Entry
Center Data Entry
Center Data Entry
Pedagogical Skills?
YES
NO
Pre-Service Training
Registration in VEPS
Registration in VEPS
Teacher/ Trainer Needs & Requests
Computer Processing
Personnel Match
Personnel Management Planning Reports
Without Pedagogical Skills
With Pedagogical Skills
Potential Teacher Data Base

The VEPS discussion is presented as follows:

- Findings
  - Staffing
  - Incentive Programs
  - Awareness
  - Labor Market Needs Analysis
  - Present Systems-Pennsylvania
  - Activities in Other States
- Conclusions
- Recommendations
- Appendices - Presentation of Definitive Findings.

FINDINGS

An integral part of the L&H review process was the classification, compilation, analysis and evaluation of the data obtained primarily through the use of various questionnaires. On-site and telephone interviews and mailed questionnaire responses provided the basis for the data collection effort.

The following sections present the major findings of the study which are relevant to the matter of regional pools of prospective teachers for programs of vocational education. Definitive data supportive of these findings are presented in the Appendix to Section IV.

STAFFING

Fifty-one schools reported a total of 231 staff turnovers for the years 1978, 1979, and 1980. Extrapolation of these figures to include all AVTSs in the Commonwealth indicates that approximately 342 turnovers would have occurred state-wide during this three year period. This translates into an average of 1.4 turnovers per school per year. About 69% of the turnover occurs in the trade/industrial and technical areas. Further, about 51% of the turnover in these two areas occurred in only eight curricula:

- automotive mechanic
- carpentry
- cosmetology
- machine shop
- automotive body
- electrical construction
- welding
- scientific data processing.

AVTS directors identified more money, retirement and moves to other schools as the most common reasons for voluntary turnover. Involuntary turnover was attributed primarily to declining enrollments and lack of pedagogical skills.

Ninety percent of the positions identified as difficult-to-fill by AVTS directors are also in the trade/industrial and technical areas. Nearly 59% of the difficult-to-fill positions in these two areas occur in the following seven curricula:

- diesel mechanic
- machine shop practice
- carpentry
- welding
- air conditioning
- scientific data processing
- electronics technology.

The major reasons advanced as presenting recruitment problems for hard-to-fill positions were inadequate salaries and certification requirements. The most viable sources identified for recruitment of vo-tech teachers were various trade/industrial and degree programs in vocational education. Mechanisms used most frequently to recruit vo-tech teachers were: classified ads, college and university placement services, personal contacts in industry, contacts with other vo-tech schools and referrals by craft committees.

As of the commencement of the 1980-81 school year, respondent AVTS directors identified forty-five vacancies, thirty-five of which were in the trade/industrial and technical areas. The five year projection of vo-tech teacher needs reflected that 87% of the need pertains to the trade/industrial and technical areas.

Forty-four respondent directors projected a total need for 62 teachers over the next 5 years; or 0.3 teachers per year per AVTS. This compares with an experience rate of 1.4 persons per year per AVTS for the past three years. Twenty-three directors indicated they had no idea of needs or were unable to project teacher needs. AVTS directors also indicated that it generally required 2 to 4 months to recruit a new teacher.

INCENTIVE PROGRAMS

Present incentive programs are in-service oriented. Pre-service incentives reported were that payment for competency testing is provided by five AVTSs and additional compensation is provided by one school district for trade experience beyond minimum requirements. Also, a tuition differential of $25 per credit is available through the Centers for approved courses taken by part-time pre- or in-service students.

AWARENESS

The only mechanism used by more than 50% of the directors to create an awareness of the teaching alternative was student counseling. Twenty-two directors (41%) indicated they use student tracking. However, when directors were asked if they determine whether past graduates are interest in the teaching alternative, only 11 of 44 directors (25%) answered in the affirmative.

Advisory council, craft committee, labor, and industry representatives indicated that few people are aware of the vocational education teaching option. Representatives indicated that most persons who are aware of the alternative have learned through chance contact rather than through formal awareness programs.

LABOR MARKET NEEDS ANALYSIS

Labor market needs analyses impact on the VEPS in an indirect way through the planning process. Following are selected facts drawn from the data collected.

The AVTS Questionnaire responses indicated that 26% of the AVTSs perform annual needs analyses, 17% do bi-annual analyses, 19% perform analyses every 3 to 5 years and 38% of the AVTSs provide analyses on an "as-needed" basis or do not perform such analyses.

Most responses from advisory council and craft committee representatives indicated that labor market needs analysis surveys performed by the AVTSs are on an informal rather than a planned and structured basis. None of the labor representatives indicated participation in labor market needs analysis and only four of twelve industry representatives knew of participation by their firms.

Directors indicated the most common use of labor market needs analysis is to change curriculum offerings through the addition or deletion of programs. Sixteen of the fifty-four AVTS directors indicated that such analyses are used specifically for determining instructional staffing needs.

Indiana University of Pennsylvania

Indiana University of Pennsylvania, Vocational Education Personnel Development Center, has developed an automated personnel system based upon efforts initiated at Temple in the mid 1970's. Indiana resurrected the project after funding restrictions and other factors resulted in discontinuance of the program at Temple. The system was originally designed to track the progress of students in the in-service training program developed to meet certification requirements. As a result of the success of the in-service tracking programs, the system was expanded to provide a means of matching an AVTS director's personnel request with qualified individuals who indicated their desire to seek a vocational education teaching position. The system matches the director's request with the individual's qualifications based primarily upon VEMIS classifications.

Once the system matches the qualifications and geographical preferences of the individual to the request, two form letters are printed. One is sent to the AVTS director listing all of the candidates who meet his requirements. Information furnished includes: name, address, telephone number, level of certification, placement information i.e. date available, days notice, whether the employer can be contacted, employment status, current position, and requested position. The second letter is directed to the potential employee to inform of the match-up. This letter identifies the AVTS, school address and telephone number, director's name and position. Once this correspondence has been mailed or the information transmitted via telephone, it is up to the two parties to proceed. Indiana requests feedback from both parties for file update.

The current system deals almost exclusively with individuals who have some form of certification. Indiana is experimenting with the registration of potential teachers. These are individuals who have expressed an interest in vocational education teaching but are not certified or as in most cases have not taken any competency examinations. The experiment's objective is to try to have the individuals acquire pedagogical skills prior to obtaining a teaching position. This provides pre-service training based on Indiana's present in-service programs. As this experiment is in its early stages no definite results are available.

Recently Temple tied into the Indiana system via a remote computer terminal to utilize the available programs. It is currently anticipated that Pitt will also be accessing the system but on a limited basis. Both Temple and Pitt will have access to the system and will be able to establish their own data files to meet specific needs of their service area. Pages 8-14 show sample input/output information associated with the Indiana system.

INTAKE PLACEMENT PROGRAM

1 Intake received: ☐ Telephone
☐ Mail
☐ Personal Taken by Whom ____________________ Today's Date __________

2 Request made by:
School ____ School's Vemis #: __________
Address ____ County No: ________
Person making request: ______________________________ Phone: ( ) __________
Area Code & No.

3 Request is for: (if for teacher, ask for Title & Curriculum #--Refer to Table B (over)

☐ Teacher ______________________________ / ____________________
Vemis Vocational Curriculum Title / Vemis Curriculum Number

☐ Supervisor

☐ Counselor

☐ Director

Position will be effective as of: Month: ____________ Day: ______ Year: ______

Additional information concerning position: ______________________________

4 Follow-Up:

Certification Code No: ________
(see Vemis Curriculum #, item 3 above; refer Table B)

County Code No. ________
(see County Listing attached)

Action taken: ______________________________ By: ____________ Date: ______
Action taken: ______________________________ By: ____________ Date: ______
Action taken: ______________________________ By: ____________ Date: ______
Action taken: ______________________________ By: ____________ Date: ______

Indicate below, the TOTAL (accumulative) amount of time spent with this placement unit.

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60

iup
INDIANA UNIVERSITY OF PENNSYLVANIA INDIANA, PENNSYLVANIA 15705
Vocational Personnel Program • 154 Whitmyre Hall • 412-357-4434

Dear Colleague:

Enclosed is the Placement Service Registration Packet you requested. The program has been designed to enable the Center to match your certification area with employment requests in the counties or areas you will identify.

Directions: In order for you to be placed in our Computerized Placement Service Program, you must complete the following procedures:

☐ 1. Please complete the demographic data requested on the Registration Form - please Type or Print.

☐ 2. Please read the Authorization to Release Information and sign.

☐ 3. Please circle the county or area numbers that correspond to the counties or areas where you would consider employment. This information is contained on the last two pages of this package.

☐ 4. Please attach copies of your Professional Certificate and Occupational Competency Examination Certificate to the Registration Form. This will enable us to ensure you that we have properly coded you into our Computerized Placement Service Program.

☐ 5. Please return the completed registration form and the copies of your Professional Certificate and OCE Certificate to:

IUP Center for Vocational Personnel Preparation
133 Whitmyre Hall
Indiana University of Pennsylvania
Indiana, PA 15705

Thank you for registering with the Center for Vocational Personnel Preparation at Indiana University of Pennsylvania.

Sincerely,

Tom O'Brien

Thomas W. O'Brien, Director

TWO:blc

Enclosure

CENTER FOR VOCATIONAL PERSONNEL PREPARATION • 133 Whitmyre Hall • 412-357-4434
iup INDIANA UNIVERSITY OF PENNSYLVANIA • INDIANA, PA 15705 CVP

A Placement Service is available for all vocationally certified personnel in Western Pennsylvania who request it. Vocational personnel may request that their availability for employment be forwarded to prospective employers, university centers, and/or the Bureau of Vocational Education. Vocational administrators may request computer searches for available personnel by telephoning or mailing requests for these searches to the Center.

PLACEMENT SERVICE REGISTRATION FORM

Social Sec. No.	Present Position	Date Available
Last Name	First Name	Middle Initial ☐
Street/R.D./Box No.	Business--Area, No. & Ext.	
City State Zip	Home Phone--Area & No.	

May present employer be contacted by prospective employer? Yes ☐ No ☐

If notice is required before terminating position, how much: ____________

Present Employer: ______________________ ( ) ______
Name Phone

Employer's Address ______________________
City State Zip

AUTHORIZATION TO RELEASE PLACEMENT INFORMATION

I hereby authorize release of my name, address, social security number, telephone number, and occupational area(s) to prospective employers, University vocational centers and the Bureau of Vocational Education for the counties I have indicated below.

Disclosure of this information is for placement (employment) purposes. I certify that I have read and fully understand the foregoing statement.

______________________ (signature) ______________________ (date)

Please circle the County or indicate the area(s) in which you would consider employment (refer to next page).

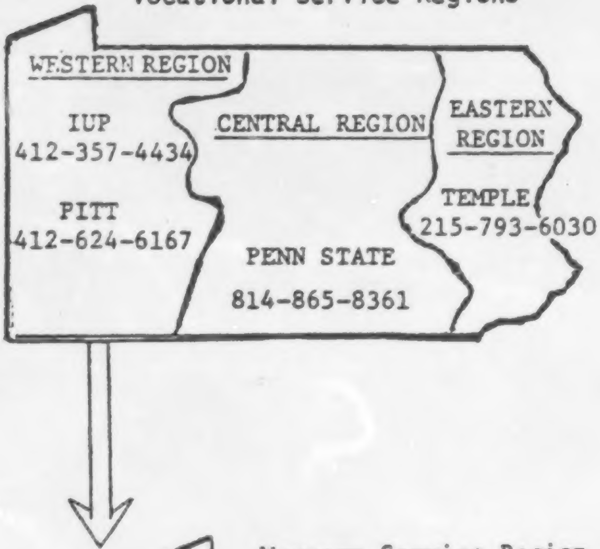
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Other ______________________

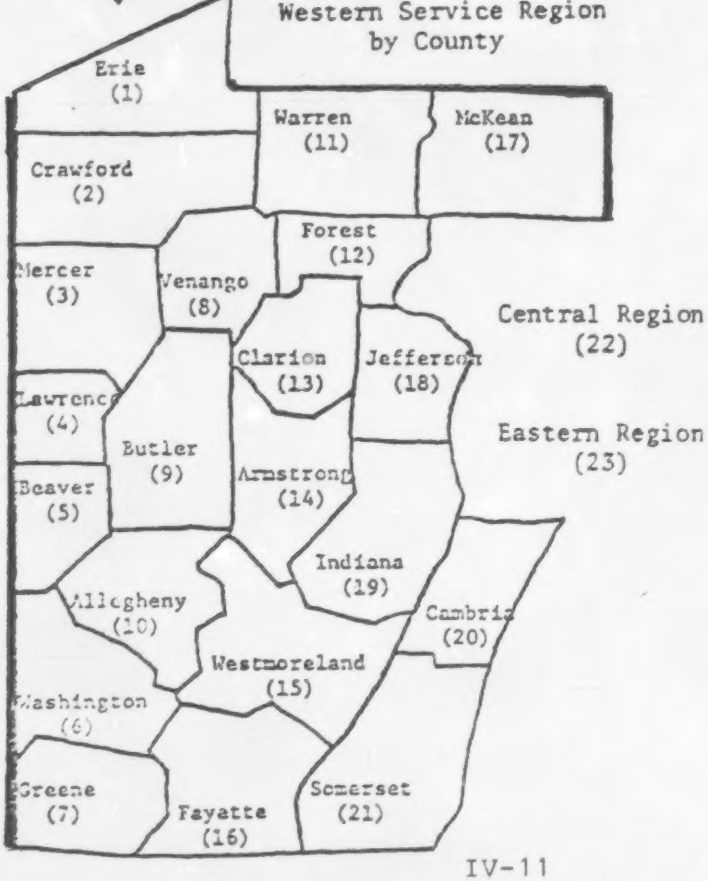
NOTE: Copies of your Professional Certificate ☐ and/or OCE Certificate ☐ must be attached to this registration form before mailing to the Center.

PLACEMENT SERVICE PROGRAM

Pennsylvania Vocational Service Regions


WESTERN REGION
IUP
412-357-4434
PITT
412-624-6167
CENTRAL REGION
PENN STATE
814-865-8361
EASTERN REGION
TEMPLE
215-793-6030

Western Service Region by County


Erie (1)
Warren (11)
McKean (17)
Crawford (2)
Forest (12)
Mercer (3)
Venango (8)
Clarion (13)
Jefferson (18)
Central Region (22)
Lawrence (4)
Butler (9)
Armstrong (14)
Eastern Region (23)
Beaver (5)
Indiana (19)
Allegheny (10)
Cambria (20)
Westmoreland (15)
Washington (6)
Greene (7)
Fayette (16)
Somerset (21)

Area Vocational Technical Schools Western Region

(1) ERIE COUNTY
Erie County AVTS
(2) CRAWFORD COUNTY
Crawford County AVTS
(3) MERCER COUNTY
Mercer County AVTS
(4) LAWRENCE COUNTY
Lawrence County AVTS
(5) BEAVER COUNTY
Beaver County AVTS
(6) WASHINGTON COUNTY
Mon Valley AVTS
Western AVTS
(7) GREENE COUNTY
Greene County AVTS
(8) VENANGO COUNTY
Venango County AVTS
(9) BUTLER COUNTY
Butler County AVTS
(10) ALLEGHENY COUNTY
A.W. Beattie AVTS
Forbes Road E. AVTS
McKeesport AVTS
Parkway W. AVTS
Steel Valley AVTS
(11) WARREN COUNTY
Warren County AVTS
(12) FOREST COUNTY
(13) CLARION COUNTY
Clarion County AVTS
(14) ARMSTRONG COUNTY
Lenape AVTS
(15) WESTMORELAND COUNTY
Central West. AVTS
Eastern West. AVTS
Northern West. AVTS
(16) FAYETTE COUNTY
Fayette County AVTS
North Fayette AVTS
(17) McKEAN COUNTY
(18) JEFFERSON COUNTY
Jefferson Co.-Dubois AVTS
(19) INDIANA COUNTY
(20) CAMBRIA COUNTY
Admiral Peary AVTS
Greater Johnstown AVTS
(21) SOMERSET COUNTY
Somerset County AVTS

WESTERN REGION VOCATIONAL PROGRAMS BY COUNTY

(1) ERIE COUNTY

Corry Area JSHS
Academy SHS
East SHS
Erie Tech. Memorial HS
Strong Vincent SHS
Erie County AVTS
Fairview HS
Fort Lebouef SHS
General McLane HS
Girard HS
Harborcreek JSHS
Iroquois JSHS
McDowell SHS
North East JSHS
Northwestern JSHS
Union City JSHS
Seneca HS

(2) CRAWFORD COUNTY

Conneaut Lake Area JSHS
Conneaut Valley JSHS
Linesville-Conneaut Smt JSHS
Cochranton JSHS
Meadville Area SHS
Crawford County AVTS
Cambridge Springs JSHS
Saegertown Area HS
Maplewood JSHS

(3) MERCER COUNTY

Commodore Perry JSHS
Farrell SHS
Geo. Jr. Republic AVTS
Greenville SHS
Grove City Area SHS
Hickory SHS
Jamestown Area SHS
Lakeview JSHS
Mercer Area JSHS
Reynolds JSHS
Sharon SHS
Sharpsville Area SHS
West Middlesex JSHS
Mercer County AVTS

(4) LAWRENCE COUNTY

Lincoln JSHS
Laurel JSHS
Lawrence County AVTS
Mohawk JSHS
Neshannock JSHS
New Castle SHS
Shenanago JSHS
Union Area HS
Wilmington JSHS

(5) BEAVER COUNTY

Aliquippa SHS
Ambridge Area JSHS
Beaver Area HS
Beaver County AVTS
Beaver Falls SHS
Blackhawk SHS
Center JSHS
Freedom Area JSHS
Hopewell SHS
Lincoln SHS
Monaca SHS
New Brighton HS
Riverside JSHS
Rochester JSHS
South Side JSHS
West Beaver Co. JSHS

(6) WASHINGTON COUNTY

Avella Area JSHS
Bentworth SHS
Bethlehem-Center SHS
Burgettstown SHS
California Area HS
Conon-McMillan SHS
Charleroi Area JSHS
Chartiers-Houston JSHS
Fort Cherry JSHS
McGuffey JSHS
Peters Township HS
Ringgold-Donora SHS
Ringgold-Monongahela SHS
Trinity SHS
Washington JSHS
Mon Valley AVTS
Western AVTS

(7) GREENE COUNTY

Carmichaels Area JSHS
Waynesburg SHS
Greene County AVTS
Jefferson-Morgan JSHS
Mapletown HS
West Green JSHS

(8) VENANGO COUNTY

Cranberry Area JSHS
Franklin Area JSHS
Oil City Area JSHS
Titusville SHS
Rock Grove HS
Venango County AVTS

(9) BUTLER COUNTY

Butler Area SHS
Butler County AVTS
Karns City Area JSHS

(9) BUTLER COUNTY (cont)

Mars SHS
Moniteau JSHS
Slippery Rock JSHS
Knoch School
Seneca Valley SHS

(10) ALLEGHENY COUNTY

AW Beattie AVTS
Forbes Rd. East AVTS
Parkway West AVTS
Steel Valley AVTS
Pathfinder School
Springdale JSHS
Avonworth SHS
Richland SHS
Baldwin SHS
Bethel Park SHS
Brentwood JSHS
Carlynton HS
Chartiers Valley HS
Churchill Area HS
Clairton SHS
Cornell SHS
Deer Lakes SHS
Duquesne HS
East Allegheny HS
Edgewood JSHS
Elizabeth Forward SHS
Fox Chapel Area SHS
Gateway SHS
General Braddock AHS
Hampton Twp. SHS
Highlands SHS
Keystone Oaks SHS
McKeesport Area AVTS
Montour SHS
Moon SHS
Mt. Lebanon SHS
North Allegheny SHS
Northgate JSHS
North Hills SHS
Penn Hills SHS
Allderdice JSHS
Allegheny HS
JA Brashear VTHS
Carrick HS
Connelley Skill Cntr.
Conroy JSHS
Letsche Alt/Ed Med Sch
Langley JSHS
David B. Oliver SHS
Peabody HS
Perry JSHS
Pioneer Center

(10)ALLEGHENY COUNTY (cont)
Schenley HS
South JSHS
South Hills SHS
Westinghouse JSHS
Plum SHS
Quaker Valley SHS
Riverview SHS
Shaler Area SHS
South Allegheny HS
South Fayette JSHS
South Park JSHS
Steel Valley SHS
Schwab Voc School
Sto-Rox SHS
Swissvale SHS
Turtle Creek SHS
Upper St. Clair SHS
West Allegheny SHS
Thomas Jefferson SHS
W Mifflin North SHS
W Mifflin South SHS
Wilkinsburg SHS

(11)WARREN COUNTY
Eisenhower JSHS
Sheffield JSHS
Tidioute JSHS
Warren Area SHS
Youngsville HS
Warren County AVTS

(12)FOREST COUNTY
East Forest JSHS
West Forest JSHS

(13)CLARION COUNTY
Clarion County AVTS
Allegheny-Clarion JSHS
Clarion Area JSHS
Clarion-Limestone JSHS
Keystone JSHS
North Clarion Co. JSHS
Redbank Valley JSHS
Union JSHS

(14)ARMSTRONG COUNTY
Apollo Ridge SHS
Dayton JSHS
East Brady JSHS
Elderton JSHS
Ford City JSHS
Kittanning SHS
Shannock Valley JSHS
Worthington JSHS
Lenape AVTS
Freeport SHS
Leechburg Area JSHS

(15)WESTMORELAND COUNTY
Belle Vernon SHS
Burrell SHS
Derry Area SHS
Franklin Regional SHS
Greater Latrobe SHS
Greensburg-Salem SHS
Hempfield Area SHS
Jeannette SHS
Kiski SHS
Laurel Valley JSHS
Ligonier Valley SHS
Monessen JSHS
Mt. Pleasant Area SHS
Valley HS
Norwin SHS
Penn Trafford JSHS
Southmoreland SHS
C Westmoreland AVTS
E Westmoreland AVTS
N Westmoreland AVTS
Yough SHS

(16)FAYETTE COUNTY
Albert Gallitin SHS
Fairchance-Georges JSHS
German JSHS
Brownsville SHS
Connellsville Area SHS
N. Fayette Co. AVTS
Fayette County AVTS
M Fuller Frazier SHS
Laurel Highlands SHS
Uniontown Area SHS

(17)McKEAN COUNTY
Bradford Area SHS
Kane Area SHS
Otto Eldred JSHS
Port Allegheny JSHS
Smethport Area JSHS
Seneca Highlands AVTS

(18)JEFFERSON COUNTY
Brockway Area JSHS
Brookville Area JSHS
Jefferson-Dubois AVTS
Punxsutawney Area SHS

(19)INDIANA COUNTY
Blairsville SHS
Saltsburg JSHS
Homer Center JSHS
Indiana Area SHS
Marion Center JSHS
Penns Manor JSHS
Purchase Line JSHS
United JSHS

(20)CAMBRIA COUNTY
Admiral Peary AVTS
Blacklick Valley JSHS
Greater Johnstown AVTS
Cambria Heights SHS
Central Cambria JSHS
Conemaugh Valley SHS
Ferndale Area HS
Forest Hills SHS
Johnstown Central SHS
Northern Cambria JSHS
Penn Cambria SHS
Portage Area JSHS
Richland SHS
Westmont Hilltop SHS

(21)SOMERSET COUNTY
Berlin-Brothers Valley
Conemaugh Twp. Area HS
Meyersdale Area JSHS
North Star JSHS
Rockwood Area JSHS
Salisbury-Elk Lick JSHS
Shade JSHS
Shanksville-Stony Creek
Somerset Area SHS
Turkeyfoot Valley JSHS
Windber Area JSHS
Somerset County AVTS

Placement Information Sheet

Description of data contained on placement sheet.

EMPLOYER DATA

Upper 1/3 of Sheet

1 Placement number; Center Address and Phone Number

2 Description of position requested by employer.

3 Employer name & address.

EMPLOYEE DATA

Center 1/3 of Sheet

4 Employee Data Current Position

5 Employee Certification Data

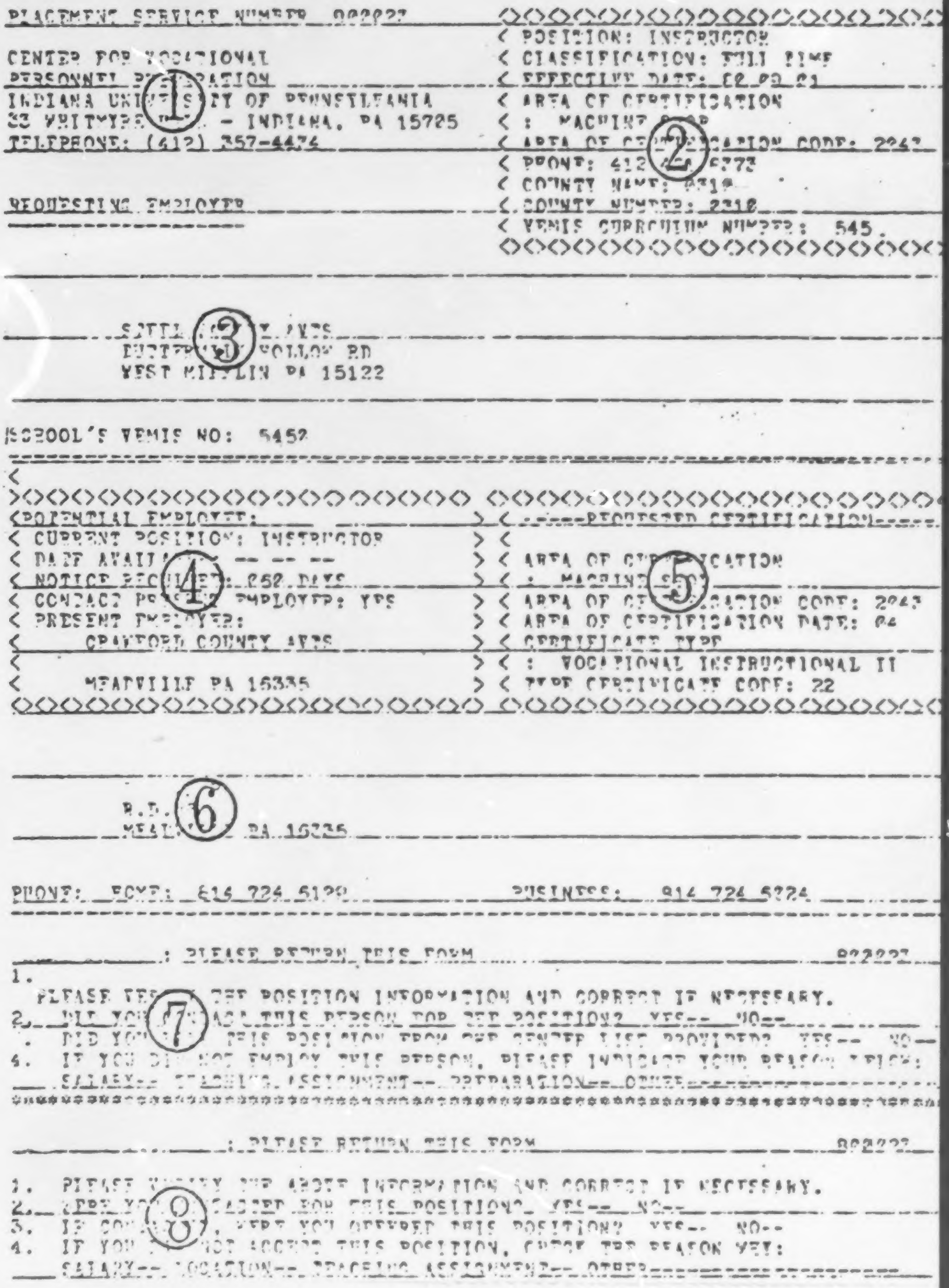
6 Employee Name, Address, and Phone number.

CENTER FEEDBACK

Lower 1/3 of Sheet

7 Employer Feedback Form (return to the Center)

8 Employee Feedback Form (return to the Center)



```
PLACEMENT SERVICE NUMBER  000027                 <><><><><><><><><><><><><><><><><><><><>
                                                 < POSITION: INSTRUCTOR
CENTER FOR VOCATIONAL                            < CLASSIFICATION: FULL TIME
PERSONNEL P[illegible]ATION                      < EFFECTIVE DATE: 00 00 01
INDIANA UNI[illegible]SITY OF PENNSYLVANIA      < AREA OF CERTIFICATION
33 WHITMYRE [illegible] - INDIANA, PA 15725      < :  MACHINE [illegible]
TELEPHONE: (412) 357-4474                        < AREA OF CE[illegible]CATION CODE: 2042
                                                 < PHONE: 412 [illegible] 6773
                                                 < COUNTY NAME: [illegible]
REQUESTING EMPLOYER                              < COUNTY NUMBER: 2310
-------------------                              < VEMIS CURRCULUM NUMBER:  545.
                                                 <><><><><><><><><><><><><><><><><><><><>

       S[illegible] [illegible] AVTS
       [illegible] HOLLOW RD
       WEST MIFFLIN PA 15122

SCHOOL'S VEMIS NO:  5452
<
><><><><><><><><><><><><><><><><><><><><> <><><><><><><><><><><><><><><><><><><><><>
<POTENTIAL EMPLOYEE:                     > < -----REQUESTED CERTIFICATION-----
< CURRENT POSITION: INSTRUCTOR           > <
< DATE AVAIL[illegible] -- -- --         > < AREA OF CE[illegible]CATION
< NOTICE REQ[illegible]: 050 DAYS        > < :  MACHINE [illegible]
< CONTACT PR[illegible] EMPLOYER: YES    > < AREA OF CE[illegible]CATION CODE: 2042
< PRESENT EMPLOYER:                      > < AREA OF CERTIFICATION DATE: 04
<     CRAWFORD COUNTY AVTS               > < CERTIFICATE TYPE
<                                        > < :  VOCATIONAL INSTRUCTIONAL II
<     MEADVILLE PA 16335                 > < TYPE CERTIFICATE CODE: 22
<><><><><><><><><><><><><><><><><><><><> <><><><><><><><><><><><><><><><><><><><><>

       R.D. [illegible]
       MEA[illegible] PA 16335

PHONE:  HOME:  814 724 5120                    BUSINESS:  814 724 5724
---------------------------------------------------------------------------------

__________: PLEASE RETURN THIS FORM                                          000027
1.
 PLEASE VER[illegible] THE POSITION INFORMATION AND CORRECT IF NECESSARY.
2. DID YOU [illegible] THIS PERSON FOR THE POSITION?  YES--  NO--
 . DID YOU [illegible] THIS POSITION FROM OUR CENTER LIST PROVIDED?  YES--  NO--
4.  IF YOU DI[illegible] NOT EMPLOY THIS PERSON, PLEASE INDICATE YOUR REASON [illegible]:
___ SALARY-- TEACHING ASSIGNMENT-- PREPARATION-- OTHER--------------------
*********************************************************************************

______________: PLEASE RETURN THIS FORM                                      000027

1.  PLEASE V[illegible] THE ABOVE INFORMATION AND CORRECT IF NECESSARY.
2.  WERE YO[illegible] FOR THIS POSITION?  YES--  NO--
3.  IF CON[illegible], WERE YOU OFFERED THIS POSITION?  YES--  NO--
4.  IF YOU [illegible] NOT ACCEPT THIS POSITION, CHECK THE REASON WHY:
___ SALARY-- LOCATION-- TEACHING ASSIGNMENT-- OTHER--------------------
```

****IMPORTANT****

Please return the appropriate feedback form to the Center (address in Box 1) as soon as possible. This will enable the Center to update both the employee and employer file.

Thank you.

The Pennsylvania State University

The Pennsylvania State University, Vocational Education Personnel Development Center, is performing manually, functions which are similar to Indiana's personnel matching system. The Penn State system is maintained in notebook fashion with separate pages for each area of training speciality. When an in-service student is seeking a position his/her name is entered on the page relating to the appropriate speciality. Likewise, when an AVTS director notifies the Center of an opening, the name and address of the AVTS are recorded on the appropriate page of training speciality. Thus, when there is a match between the AVTS need and the availability of job candidates, the parties are so advised. See page IV-16, for an example of the form used in the Penn State system.

It is the responsibility of the individual parties to contact each other. The Center serves as a registry and referral medium primarily for the students of its five-year vocational education program. However, the Center will also respond to other requests.

Both the Indiana and Penn State systems serve a similar purpose; that is, to respond to AVTS directors in their service area who have a specific teacher need. Both systems are accessible to AVTS directors and job seekers and input to the systems and requests for information can be processed expeditiously. Neither of these systems currently track uncertified potential teachers; however, the Indiana system is experimenting with this system enhancement.

The discussions with directors of the two Centers indicated that usually they are not contacted until the AVTS director has exhausted all local recruitment sources. The fact that the Centers are a source of last resort could be an indication that:

- the AVTSs do not have knowledge of the referral systems
- the AVTS directors do not have confidence in existing referral systems
- the AVTS directors do not have need of such magnitude as to require contact with Centers.

CARPENTRY

School	When Needed	Prospective Teacher	Date Passed OCE

ACTIVITIES IN OTHER STATES

As part of the data gathering process, the Federal government and various state agencies were contacted to determine if similar projects had been undertaken.

The Personnel Development Branch, Division of National Vocational Programs, Washington, D. C., was contacted for referrals. The names of five states and persons to contact were supplied. The five states referred were: Florida, Idaho, Iowa, Ohio and Oklahoma. In addition, the Educational Resources Information Center (ERIC), Washington, D. C., indentified Wisconsin as a source for related information. The Bureaus of Vocational Education in Arizona and Florida were visited.

Telephone calls and visits to various states revealed minimal information relevant to this Pennsylvania project. Brief statements pertaining to activities of other states follows.

ARIZONA

Arizona's vocational education progams are integral parts of the comprehensive high schools. Presently, the hiring of vocational education teachers is not considered a problem. However, there is a teacher clearing house at the State level where vacancy information is available and interested individuals can register.

FLORIDA

The Vocational Division of the Florida State Department of Education developed a computerized system, CAPS--Cooperative Agency Placement Service--as a broad based placement effort to match formal training with job openings.

The input to the system includes two groups: names of employers and names of graduates. Originally the State Employment Service Bureau provided a list of 14,000 employers who hired more than ten people through the Bureau. Letters were sent to employers explaining the system and the benefits it could provide to them at no cost. Employers were urged to register with CAPS regardless of their present needs. Employers completed an Employer Hiring Interest survey form by selecting and recording the appropriate occupational and degree titles in which they have a time-to-time hiring interest. These survey forms are sent out annually in order to update the files. Forms are kept very simple and continuous feedback is provided. Employers have indicated this simplicity and continuous feedback is necessary for their participation.

Student input names are received from comprehensive high schools, post-secondary area vocational-technical schools and community colleges. Also, efforts are being made to obtain names from Florida's universities, CETA prime sponsors and operators, Florida's licensed private trade schools, the Veteran's Administration and the State Employment Service Bureau.

Every 60 days or upon request, computer printouts provide names of job candidates living in an employer's county or surrounding counties who have completed training in one of the areas in which the employer registered an interest. This computer listing, called a CAP-O-GRAM, lists each occupational or degree title registered by the employer followed by the names, addresses, phone numbers, and the institutions where job seekers received training. It is the employers responsibility to contact the job candidates.

About three to four weeks after the CAP-O-GRAM's are mailed, employers were sent follow-up cards asking whether they want to continue receiving CAP-O-GRAMS, the number of persons contacted and the names and school number of the individuals they hired. In addition, all individuals listed on the CAP-O-GRAMS receive follow-up cards asking whether they still want their name listed, whether they have obtained a job, the name of their employer if obtained through CAPS and the number of employers who contacted them.

In order to make this program a success, the State implemented a substantial marketing and public relations effort. The State's Vocational Division began efforts to get employers interested by attending various trade and professional association meetings throughout the State. In addition, a two-day statewide recruiting workshop was conducted for personnel directors.

The marketing effort to involve graduates included brochures and posters distributed to participating schools. In addition, a toll-free number for information on educational programs was established.

IDAHO

The Idaho State Department of Vocational Education is operating a computerized career information system. It is used for the purpose of tracking vo-tech students after graduation. Employers can receive information on graduates trained in areas of interest to them. There is no specific program or model for recruitment and placement of teachers for the vocational education program.

IOWA

In 1975, the Iowa Department of Instruction, Career Education Division, funded a research project to ascertain the need for a resource pool to aid vocational schools in securing qualified vocational-technical teachers. The purpose of this feasibility study was two-fold:

- to assist the Department of Public Instruction in determining the vocational-technical staffing needs of the area schools
- to assist the area schools in providing input to a system for pooling vocational-technical teacher applicants.

The major problem associated with the employment needs was the recruitment of qualified individuals to fill these positions. It was determined that because of the lack of communication to the right candidate pools, a qualified individual working in industry had little, if any, knowledge of available positions. What little information was available was often fragmented as well as erroneous.

A questionnaire was developed for soliciting information from the area vocational schools regarding their methods of recruitment, recruiting costs, and interest in an Educational Personnel Information Center. Interviews were conducted with persons responsible for hiring new faculty at each of the 15 schools and with industry personnel at various levels in a variety of industries.

Personnel from area vocational schools were asked to identify the sources used to recruit teachers. Local newspapers and major newspapers were cited by 13 schools. University placement offices were cited by 12 schools, and personal contacts were cited by 6 schools.

School personnel were asked whether new teachers are hired early so that professional qualifications can be acquired before school starts. Only two schools answered affirmatively, five schools claimed they try whenever possible, and eight schools answered no to the question.

Twenty-three industries, ranging from large corporations to small, individually owned businesses, were interviewed. The personnel interviewed ranged from a corporate personnel director to a garage mechanic. Most interviewees knew of the vocational school and its location and a few had an idea of the curricula offered. None of the interviewees knew whether their industry speciality was being taught or the requirements to become a teacher in vocational education.

It was concluded that implementation of an Educational Personnel Information Center was not only feasible, but was needed and wanted by the area vocational schools in the State of Iowa.

Two of the recommendations made as a result of the feasibility study were:

- a model Educational Personnel Information Center should be developed which would include recruitment sources, sample recruitment methods and materials, a standard job description form, and a description of pre-screening and job/applicant match-up procedures.
- conduct a pilot study using the models' materials and set-up.

The feasibility study was conducted over a one-year period followed by a one-year pilot implementation effort. Upon termination of the one-year pilot study, the State Department of Public Instruction was to continued the project. However, the Department did not follow through with system implementation.

OHIO

Presently, the hiring of vocational education teachers is not considered a problem; consequently, no special effort has been made to develop a VE teacher recruitment and placement system. However, funding was received recently to develop a computerized system for projecting needs for persons in all areas (unskilled, semi-skilled, skilled and professional). This new system should ultimately reflect VE teacher needs.

OKLAHOMA

No effort is being made in Oklahoma to establish a computerized teacher resource pool. However, Oklahoma has developed a computerized job bank for individuals who have graduated from vocational-technical schools. This job bank operates in conjunction with the State Bureau of Employment Services and CETA. Some schools have purchased terminals so as to have on-line access to the data. These terminals are enabling schools to use the system for counseling secondary and post-secondary students as to vocational and technical areas that are in great demand. Plans are being developed to use the system to perform computerized labor market analyses.

WISCONSIN

A project was conducted in Wisconsin which had objectives similar to the current Pennsylvania project except that it was directed toward a different area of need in the vocational education program.

Through the Educational Resources Information Center (ERIC), Washington, D. C., a copy of a project undertaken by the Wisconsin State Department of Vocational Technical Education in 1977 was obtained. The Wisconsin State Board of Vocational, Technical and Adult Education (WBVTAE) sponsored a project to develop a Job Bank/Talent Pool for which funding was provided by the Women's Educational Equity Act (WEEA). The purpose of this project was to inform women, minority and other interested Vocational, Technical and Adult Education (VTAE) personnel of positions available in the system, and to encourage them to apply for these positions. The services provided by this project included a job bank bulletin, training programs, WEEA Newsletter and Talent Pool/Job Bank.

An informational letter and a talent pool registration form were distributed to 1,000 women in the system, who were identified through the WBVTAE personnel directory. This informational letter and form were also mailed to District Administrators, Department Chairpersons, Affirmative Action Officers, Personnel Officers, and Women's Resource Center Coordinators in an effort to saturate all possible channels. The registration questionnaire requested information concerning: education, work experience, special job skills, and personal characteristics of interested applicants. This information was then cross-indexed with a job bank of positions at all levels of openings throughout the VTAE System.

Each district within Wisconsin was to report information concerning job vacancies to WBVTAE. Listings were then combined and published in the "Job Bank Bulletin". This Job Bank Bulletin was distributed the first and third week of each month. Each bulletin listed vacancies in all occupational areas. The listings include: job qualifications and description outlines, location, salary range, contact person, and application deadline.

A manual process for referring talent pool participants to jobs within WBVTAE was initiated originally which included acknowledgement of receipt of application by letter, a telephone follow-up, inclusion on the Job Bank Bulletin mailing list, notification of positions in which registrants indicated interest, and a "status of participation" form.

A computerized system for storing data about the talent pool participants was developed. Information from the registration form was transferred to a code sheet and keypunched. This information was then available on print-outs which showed the entire pool in terms of various descriptive data such as education, occupational area, and preferred district location.

The implementation of the manual process began in May and ended in September, 1977. During this time, eight issues of the Job Bank Bulletin were published. Position descriptions made available from the school districts totalled 168 during this period. Forty persons registered during this pilot phase. WEEA funded the project for the first year and when funds were not received for the second year the project was abandoned. Implementation of the computerized system never occurred.

CONCLUSIONS

1. The demand factor for vocational education instructional staffing, on either an individual AVTS or statewide basis, does not warrant the design and implementation of a new regional and/or state-wide personnel information system to identify qualified teachers for potential staffing of local vocational training programs.

2. Present personnel information systems in use at the Vocational Education Personnel Development Centers at the Indiana University of Pennsylvania and The Pennsylvania State University can, with appropriate modifications and enhancements, serve as regional and/or statewide pools of personnel information to be accessed by AVTS directors for recruitment of vocational education teachers. The Indiana system has the greatest potential to meet state-wide needs due to its ability to maintain regional files of the Centers at a central location.

3. Inadequacies in the present awareness and incentive programs serve to retard the flow of potential entrants into the trade/industrial and technical areas of vocational teaching. The report sections pertaining to Pre-service, Awareness and Incentives discuss findings, conclusions and recommendations for these subjects.

RATIONALE

The above conclusions were reached based upon the following rational:

- The filling of positions in a two to four month time frame is comparable with experience in private industry. Problems may arise not as a result of potential candidate shortages but as a result of lack of awareness that a position is to become vacant so that it can be acted on in a timely fashion. This is evidenced by the fact that fewer than 50% of the respondent districts prepare needs analyses in three-year or less cycles, and that the directors' projections of teacher needs are substantially less than actual experience (projected need of 0.3 vs. actual turnover experience of 1.4 teachers).

These factors may result in a director approaching the new school year short one or two teachers and trying to fill positions in a short period of time. The combination of the 2 to 4 month time element to fill a position and the supply and demand factors result in difficulty of filling positions.

- The total number of vacancies on a state-wide basis does not warrant the cost to design and implement a new system.
- Existing systems are in place which, with minor modifications can be made to meet the State's needs. This is especially true in light of the fact that three of the four Centers are currently capable of using Indiana's automated system to provide a regional clearing house for vocational education teachers and directors. In addition, Indiana is currently experimenting with the establishment of a pre-service qualified teacher resource pool.

The Indiana system has the greatest potential because:

- The system is operational and has the characteristics necessary for the limited additional purposes proposed.
- Its use will provide a uniform system capable of providing the same information to each of the Centers. Additionally, the collection of statistical data for planning purposes is simplified due to the uniformity of the data received.
- The Penn State manual system, although meeting limited placement needs of its region, would be cumbersome to operate on a state-wide basis and could not be readily adapted to collect and report management information appropriate for planning purposes. Additionally, it would require three Centers to change from an automated to a manual system.

RECOMMENDATIONS

The Vocational Education Personnel System (VEPS) as envisioned by L&H is composed of many parts. It is broader than just the manual or electronic matching of an AVTS director's request with a potential teacher. It encompasses the additional elements of awareness, incentives, certification requirements, labor market needs analysis and pre-service programs. Each of these elements, although addressed in other sections of this report, should be considered an integral part of an integrated and comprehensive VEPS.

With respect to an overall system, the following alternatives or options were considered:

1. Do nothing in that the systems now in place are able to fill the majority of the AVTS directors' needs for teachers. However, this alternative is rejected because it cannot deal with the primary problem facing the AVTSs; that is, the hiring of new teachers who have both trade competency and the desired pedagogical skills. The State has recognized the weaknesses in the current systems as evidenced by this project. It should be borne in mind that the current systems meet the basic needs of the AVTS directors even though qualifications are not always as desired and the burden of teacher recruitment rests primarily on the directors.

2. Implement, in a phased manner, the recommendations presented below and in other sections of this report. This approach would require the following:

    - implementation of an awareness program informing of the teaching alternative to trades practice and the requirements to become a teacher

    - modification of certification requirements

    - enhancement of the existing vacancy/personnel matching systems.

The above three actions should be performed and the results evaluated. The objective is to get more and better qualified individuals applying for positions primarily in the trade/industrial and technical areas. The cost for the above action steps would be minimal.

If the above actions do not provide the quantity of qualified teachers desired, two additional steps should be taken to enhance the prospects of success. These steps are:

- establishment and/or extension of incentive programs which take into consideration pre- and in-service incentives, market place supply and demand factors and local and State budgetary constraints
- establishment and/or extension of regional pre-service training programs which offer individuals the opportunity to acquire pedagogical skills in a readily accessible, timely and cost effective manner.

The addition of these two items should provide the impetus necessary to establish the resources pool of qualified teachers. The two separate phases are recommended primarily from a cost justification standpoint. The second phase activities are more costly and may be unnecessary if the awareness programs and certification modifications are successful in creating a pool of interested and qualified potential teachers.

3. Concurrent implementation of all the steps named in alternative 2. This would require actions to improve existing awareness programs, modification of certification requirements, establishment and/or extension of incentive and pre-service training programs, and enhancements to the existing vacancy/person matching systems.

It is recommended that alternative 2, the phased approach, be implemented for the following reasons:

1. This approach provides the opportunity to determine and evaluate the effectiveness of various actions to increase the quality and quantity of personnel; such as whether it is due to awareness or incentive programs or to a change in certification requirements.
2. It is the least costly, initially, of the two alternatives which address the problem of providing more quality teachers.
3. The needs of the AVTSs may not justify the full scale approach in light of actual turnover experience and higher costs associated with the concurrent implementation of all recommendations.

In regard to the operational aspects of the VEPS, it is recommended that:

1. Regional pools of qualified individuals be established based on the current geographical regions served by the Centers

2. The Indiana system be used to store and retrieve information relating to the needs of the participants (i.e. State, Centers, AVTSs, other secondary/post-secondary institutions, industry and individuals).

3. The Indiana system, which contains only current data, should be modified to provide for the retention and retrieval of specific personnel management information including:

   - historical turnover data (i.e. vacancy identification by curricula, level of certification, location, frequency, etc.)

   - potential teacher registration data

   - data re current openings.

   The ability to expand a personnel search beyond the region of the requesting AVTS to the entire State should be provided. Thus, it is recommended that all Centers join in the use of Indiana's system to provide a centralized, uniform system available to the AVTS directors through their respective Regional Centers. Each Center should be responsible for direct input to its segment of the files and for responding to requests from AVTS directors for job candidates.

   Upon compilation and summarization, personnel management reports should be furnished to the Centers and the PDE for program planning purposes. The reports should indicate those areas which require the greatest effort on the part of the State and the Centers to prepare programs for training new teachers for the future. The information which would flow from the AVTSs into the VEPS should not duplicate information now going into existing State systems such as VEMIS.

4. Data on individuals who are enrolled in or have completed pre-service training should be registered in the system. This will increase the pool of individuals which directors can access.

5. AVTS directors and other interested parties should be informed of the availability and capability of the VEPS and they should be encouraged to use it by submitting requests through their respective regional Centers.

6. The AVTSs should use student tracking mechanisms to identify former students who have sufficient requisit wage and learning experience to consider the teaching alternative; such persons should be advised about the teaching opportunity and requirements and be registered in the VEPS if interest is indicated.

7. Current teachers should be surveyed to determine mobility and those interested in moving to another AVTS should be encouraged to register in the VEPS. These individuals would already have many, if not all, of the requisit experience but may have personal reasons to seek change. Teachers desiring change should be able to register in VEPS without prejudice.

Proper use of the Indiana system will allow for the availability of information on a current basis. Effectiveness of the system is dependent upon the cooperation of the Centers and AVTSs to supply the necessary data to the system. Each Center should be responsible for entry of data for the AVTSs in its region, maintenance of its data files, and transmittal of the output results to the AVTS directors.

The AVTSs should be responsible to supply information on vacancies and turnover to the Centers. Additionally each director, through his Center, should use the VEPS to fill positions and inform the VEPS when positions have been filled.

Indiana should have the responsibilities of first, its activities as a Center and second, to provide programming and data processing support for the VEPS. Thus, Indiana would be responsible for system modifications to maintain data files on turnover, certification, vacancies and current openings; to respond to requests from AVTS directors via the Centers: and to provide reports for Centers and PDE planning purposes.

The BVE should work with Indiana and the other Centers to determine if additional information is desired and how such data might be used in the planning process.

COST/BENEFIT ANALYSIS

The costs incurred for the utilization of the Indiana system should be mininal in light of the benefit to be derived. Costs will be incurred for the recommended program modifications, increased utilization of the computer system, telephone connect time for the remote terminals and salary costs for the data entry and inquiry activity occurring at the AVTSs and the Centers. There should be no costs for computer terminals at each Center as each Center is already so equipped. The potential benefits of strenghtened instructional staffs appear to far outweigh the modest costs likely to be incurred. The contracts between the BVE and the Centers, especially Indiana, should be modified to reflect the increased costs due to this program. Funds to implement the recommendations may come from redirection of Centers' activities rather than the introduction of new activities.

APPENDIX TO

IV. VOCATIONAL EDUCATION PERSONNEL SYSTEM

RESULTS OF STAFFING AND STUDENT TRACKING COMPONENTS OF THE AVTS QUESTIONNAIRE

STAFFING

1. What has been your staff turnover experience (for both voluntary and involuntary separations) for each of the last three years by curriculum as identified for certification purposes?*

STAFF TURNOVER BY CURRICULUM

CURRICULUM	Voluntary	Involuntary	Total
TRADE/INDUSTRIAL			
Automotive Mechanic	13	2	15
Carpentry	7	3	10
Cosmetology	6	3	9
Machine Shop	6	1	7
Automotive Body	6		6
Electrical Construction	4	2	6
Welding	6		6
Building Trades Maintenance	2	3	5
Appliance Repair	3	1	4
Diesel Mechanic	4		4
Electrical Occupations	4		4
Graphic Arts	1	3	4
Air Conditioning	2	1	3
Textile Production/Fabrication	2	1	3
Drafting	2		2
Graphic Occupations	1	1	2
Heating	2		2
Heavy Equipment	2		2
Industrial Maintenance Mechanic	1	1	2
Masonry	1	1	2
Metal Work Occupations	2		2
Small Engine Repair	2		2
Electrical Industrial	1		1
Foundry	1		1
Masonry Occupations	1		1
Mine Equipment Maintenance	1		1
Painting/Decorating	1		1
Power Sewing		1	1
Radio/TV Repair	1		1
Sheet Metal	1		1
Trade/Industrial, Other	1		1
Total Trade & Industrial	87	24	111

*The information received from directors on some questions was not specific and some data could not be used. Questions specifically asked for the curriculum as identified for certification purposes and, in many instances, local curriculum titles were given. Where possible, the Pennsylvania Vocational Education Management Information Directory of Secondary Students for the School Year 1978-1979 was used to identify the curriculum offered. If the exact curriculum in which the local curriculum title should be categorized could not be determined, the information was disregarded. Findings are based on those curriculums that could be categorized correctly.

CURRICULUM	Voluntary	Involuntary	Total
TECHNICAL			
Scientific Data Processing	9		9
Electronics Technology	4	1	5
Drafting & Design Technology	3	1	4
Agricultural Technology	2		2
Chemical Technology	1	1	2
Architectural Design Technology	1	–	1
Total Technical	20	3	23
HEALTH			
Health Assistant	8	3	11
Dental Assistant	4		4
Practical Nursing	1	–	1
Total Health	13	3	16
AGRICULTURE			
Horticulture	6	2	8
Agricultural Production	3	1	4
Total Agriculture	9	3	12
GAINFUL HOME ECONOMICS			
Food Management, Production and Service	10	4	14
Child Care Guidance	1		1
Institutional/Home Management Service	1	–	1
Total Gainful Home Economics	12	4	16
BUSINESS EDUCATION			
Business Data Processing	3	1	4
Accounting		1	1
General Clerical	1	–	1
Total Business Education	4	2	6

CURRICULUM	Voluntary	Involuntary	Total
DISTRIBUTIVE EDUCATION			
Distributive Education	8	1	9
Warehousing	2	–	2
Total Distributive Education	10	1	11
SUMMARY TOTALS			
Trade/Industrial	87	24	111
Technical	20	3	23
Health	13	3	16
Agriculture	9	3	12
Gainful Home Economics	12	4	16
Business Education	4	2	6
Distributive Education	10	1	11
Total All Curriculums	155	40	195

STAFF TURNOVER BY CURRICULUM BY CENTER

CURRICULUM	Pitt	Indiana	Penn State	Temple
TRADE/INDUSTRIAL				
Automotive Mechanic	1	2	7	5
Carpentry	1	2	3	4
Cosmetology	1	1	3	4
Machine Shop	1		6	
Automotive Body		4	1	1
Electrical Construction	1	3	1	1
Welding	2	1	1	2
Building Trades Maintenance		1	2	2
Appliance Repair	1		2	1
Diesel Mechanic		1	2	1
Electrical Occupations	1		3	
Graphic Arts	1		2	1
Air Conditioning	1			2
Textile Production/Fabrication			2	1
Drafting	1			1
Graphic Occupations			2	
Heating			2	
Heavy Equipment			1	1
Industrial Maintenance Mechanic	2			
Masonry	1		1	
Metal Work Occupations		2		
Small Engine Repair			1	1
Electrical Industrial		1		
Foundry				1
Masonry Occupations			1	
Mine Equipment Maintenance		1		
Painting/Decorating				1
Power Sewing				1
Radio/TV Repair				1
Sheet Metal				1
Trade/Industrial, Other			1	
Total Trade/Industrial	15	19	44	33

CURRICULUM	Pitt	Indiana	Penn State	Temple
TECHNICAL				
Scientific Data Processing	1		5	3
Electronics Technology			1	4
Drafting & Design Technology		1	2	1
Agricultural Technology	1	1		
Chemical Technology				2
Architectural Design Technology	—	—	—	1
Total Technical	2	2	8	11
HEALTH				
Health Assistant	2	1	3	5
Dental Assistant	1			3
Practical Nursing	—	—	—	1
Total Health	3	1	3	9
AGRICULTURE				
Horticulture			3	5
Agricultural Production	1	2	—	1
Total Agriculture	1	2	3	6
GAINFUL HOME ECONOMICS				
Food Management, Production and Service	2	3	4	5
Child Care Guidance				1
Institutional/Home Management Service	—	—	1	—
Total Gainful Home Economics	2	3	5	6

CURRICULUM	Pitt	Indiana	Penn State	Temple
BUSINESS EDUCATION				
Business Data Processing	1		1	2
Accounting			1	
General Clerical	_	_	1	_
Total Business Education	1	0	3	2
DISTRIBUTIVE EDUCATION				
Distributive Education	2	1	4	2
Warehousing	1	_	_	1
Total Distributive Education	3	1	4	3
SUMMARY TOTALS				
Trade/Industrial	15	19	44	33
Technical	2	2	8	11
Health	3	1	3	9
Agriculture	1	2	3	6
Gainful Home Economics	2	3	5	6
Business Education	1	0	3	2
Distributive Education	3	1	4	3
Total All Curriculums	27	28	70	70

2. To what do you attribute the voluntary or involuntary turnover in the above areas? Rank the reasons for leaving: 1 being the most prevalent reason:

VOLUNTARY	Assigned Points*	Tally
More money	47	31
Retirement	46	30
Move to another school	46	25
Dissatisfaction with job environment	25	24
Family and/or personal reasons	16	15
Better benefits	12	4
Higher education	11	8
Administrative hassles	10	6
Limited advancement	4	4

Other: Private business, husband transfer, promotion, certification, geographic location

INVOLUNTARY	Assigned Points*	Tally
Declining enrollments	23	17
Lack of pedagogical skills	23	13
Inability to establish and maintain effective working relationships	13	8
Curriculum deletion due to reduced labor market demand	11	9
Inadequate attention to administrative matters	6	4
Budget cuts	5	3

Other: Going back to school, unsatisfactory teaching performance, failure to maintain teacher certification

*This question was interpreted by directors two different ways. Some directors ranked the reasons by assigning 1 to the reason most prevalent and so forth, while other directors checked the reasons they considered most prevalent. Because of the two interpretations, we used two methods of analyzing the data. With those directors who ranked the reasons, we assigned numeric point values to the top 5 reasons to determine the most frequent reason for turnover. Any item ranked 1 received a point value of 5, items ranked 2 received a point value of 4, items ranked 3 received a point value of 3, items ranked 4 received a point value of 2, and items ranked 5 received a point value of 1. These point values were then added together to determine the most prevalent reasons. With those directors who indicated with a check mark the prevalent reasons for turnover in their school, we used the raw number of tally marks to determine the most frequently cited reasons for turnover. Despite the two methods of analyzing the data, both methods produced almost identical results.

3. & 4. Have certain positions been more difficult to fill than others? What is the average number of months from the date of awareness of the vacancy to the date the position is filled?

DIFFICULT-TO-FILL POSITIONS BY CURRICULUM

TRADE/INDUSTRIAL

Diesel Mechanic	7
Machine Shop Practice	5
Carpentry	5
Welding	4
Air Conditioning	4
Sheet Metal	3
Automotive Mechanic	2
Electrical Occupations	2
Heating	2
Aircraft Maintenance	1
Appliance Repair	1
Building Construction Occupations	1
Building Trades Maintenance	1
Foundry	1
Graphic Occupations	1
Industrial Maintenance Mechanics	1
Masonry	1
Metal Fabrication	1
Plumbing	1
Radio/TV Repair	1
Total Trade and Industrial	45

TECHNICAL

Scientific Data Processing	7
Electronics Technology	5
Mechanical Drafting/Design	2
Agricultural Technology	1
Architectural Design Technology	1
Audio-Visual Communication Technology	1
Chemical Technology	1
Total Technical	18

AGRICULTURE

Agricultural Production	1
Total Agriculture	1

GAINFUL HOME ECONOMICS

Food Management, Production and Service	1
Total Gainful Home Economics	1

BUSINESS EDUCATION

Business Data Processing	2
General Clerical	1
Total Business Education	3

DISTRIBUTIVE EDUCATION

Distributive Education	1
Warehousing	1
Total Distributive Education	2

SUMMARY TOTALS

Trade/Industrial	45
Technical	18
Agriculture	1
Gainful Home Economics	1
Business Education	3
Distributive Education	2
Total Difficult-To-Fill Positions	70

DIFFICULT-TO-FILL POSITIONS BY CENTER

CURRICULUM	Pitt	Indiana	Penn State	Temple
TRADE/INDUSTRIAL				
Diesel Mechanic		2	2	3
Machine Shop Practice			3	2
Carpentry	1	3	1	
Welding	1	1		2
Air Conditioning		1	2	1
Sheet Metal			2	1
Automotive Mechanic		1	1	
Electrical Occupations	1			1
Heating	1		1	
Aircraft Maintenance				1
Appliance Repair			1	
Building Construction Occupations			1	
Building Trades Maintenance			1	
Foundry				1
Graphic Occupations			1	
Industrial Maintenance Mechanics				1
Masonry			1	
Metal Fabrication		1		
Plumbing				1
Radio/TV Repair				1
Total Trade and Industrial	4	9	17	15
TECHNICAL				
Scientific Data Processing	1	1	4	1
Electronics Technology		1		4
Mechanical Drafting/Design			1	1
Agricultural Technology	1			
Architectural Design Technology				1
Audio-Visual Communication Technology				1
Chemical Technology				1
Total Technical	2	2	5	9

CURRICULUM	Pitt	Indiana	Penn State	Temple
AGRICULTURE				
Agricultural Production	1	_	_	_
Total Agriculture	1	0	0	0
GAINFUL HOME ECONOMICS				
Food Management, Production and Service	_	_	1	_
Total Gainful Home Economics	0	0	1	0
BUSINESS EDUCATION				
Business Data Processing	1			1
General Clerical	_	_	1	_
Total Business Education	1	0	1	1
DISTRIBUTIVE EDUCATION				
Distributive Education			1	
Warehousing	_	_	_	1
Total Distributive Education	0	0	1	1
SUMMARY TOTALS				
Trade/Industrial	4	9	17	15
Technical	2	2	5	9
Agriculture	1	0	0	0
Gainful Home Economics	0	0	1	0
Business Education	1	0	1	1
Distributive Education	0	0	1	1
Total Difficult-To-Fill Positions	8	11	25	26

TIME TO FILL VACANCIES

Number of months	Incidence	Number of months	Incidence
Up to 1 month	3	5 to 6 months	3
1 to 2 months	9	6 to 7 months	3
2 to 3 months	11	7 to 8 months	1
3 to 4 months	5	over 8 months	5
4 to 5 months	2		

Total responses 42

5. Why has recruitment for these positions been difficult?

REASON FOR DIFFICULTY	NUMBER OF RESPONSES
Salary	38
Certification requirements	30
Trade competency requirements	6
Lack of incentives	5
Reluctance to move	5

Other:

- Not many people in this business because of the variety of experience needed
- Few applicants to choose from
- No applicants available
- Vocational program more broad than trade area thus applicants trade competencies are limited
- Lack of certified tradesmen
- Lack of adequate qualifications and versatility
- No interested candidates
- Individuals not sure they can teach; remoteness of area; desire not to relocate
- Lack of available supply--have to search--AVTS does not pay for examination or coursework
- Cosmetology supervisor certification requirement
- Want to practice trade not teach
- Lack of confidence

6. Which do you consider to be viable sources of vo-tech teachers for the trade and industrial curricula?

VIABLE SOURCES OF TEACHERS	NUMBER OF RESPONSES
Trade/Industry	51
Degree programs in vocational education	26
Military	16
Teachers trained for other than vo-tech	5
Other:	

- Former AVTS students
- Craft advisory committees

COMMENTS FROM DIRECTORS

Degree programs

- Center programs (degree) do not stress trades enough
- Pitt is reluctant to take IA teachers; won't accept previous IA credits
- Thinks PSU program is good but still light in trade experience
- Universities need to teach people how to teach
- Degree program depends--need more industry experience
- Degree programs need more trade experience
- Sent through Personnel Department; no say in selection

Military

- Have had good applicants from the military
- Had one good and one bad from military
- Have used 1 military person for automotive, but didn't work well with kids; ran shop like an army
- One 20-year man in machine shop

7. Which of the following mechanisms have you used to recruit vo-tech teachers? Of the items checked, list the three most effective mechanisms:

RECRUITMENT MECHANISMS	Frequency Tally	Frequency Percent*
Colleges and universities	50	93
Classified ads	49	91
Other vo-tech schools	44	81
Personal contacts in industry	39	72
Craft committees	38	70
Advisory councils	30	56
Community personal contacts	24	44
Vo-tech graduate tracking	23	43
Employment agencies	22	41

* Percentages were calculated by dividing the number of directors using a particular recruitment mechanism by the fifty-four directors who responded to this part of the question.

MOST EFFECTIVE MECHANISMS	1st	2nd	3rd	Total**
Classified ads	21	6	8	35
Colleges and universities	13	12	5	30
Personal contacts in industry	5	9	7	21
Other vo-tech schools	3	8	9	20
Craft committees	5	8	4	17
Advisory councils	1	1	4	6
Vo-tech graduate tracking	1	-	3	4
Community personal contacts	-	1	1	2
Employment agencies	-	1	1	2

Other:

- Ads in educational magazines
- PA school boards
- Indiana computer bank
- List of people who passed NOCTI
- Night school instructors
- Vendors
- Legislative Bulletin
- PSBA Bulletin
- News releases, radio

** Forty-nine directors proceeded to rank the three most effective mechanisms. These numbers represent the frequency with which directors indicated the effectiveness of the particular mechanism.

8. What were your instructional staff vacancies as of the commencement of the 1980-81 school year?

INSTRUCTIONAL STAFF VACANCIES BY CENTER

CURRICULUM	Pitt	Indiana	Penn State	Temple	Total
TRADE/INDUSTRIAL					
Carpentry		1		3	4
Building Trades Maintenance			2	1	3
Machine Shop Practice			3		3
Air Conditioning	1			1	2
Automotive Body		2			2
Automotive Mechanic	1		1		2
Commercial Art			1	1	2
Appliance Repair				1	1
Auto-Diesel Mechanic	1				1
Business Machine Maintenance			1		1
Drafting	1				1
Electrical Construction			1		1
Heating			1		1
Metal Fabrication		1			1
Plumbing				1	1
Small Engine Repair			1		1
Welding				1	1
Total Trade/Industrial	4	4	11	9	28
TECHNICAL					
Scientific Data Processing			2	1	3
Electronics Technology				2	2
Business Data Processing	1				1
Drafting Design Technology	1				1
Total Technical	2	0	2	3	7

CURRICULUM	Pitt	Indiana	Penn State	Temple	Total
HEALTH					
Dental Assisting/Assistant	1			1	2
Health Assistant	_	_	1	1	2
Total Health	1	0	1	2	4
GAINFUL HOME ECONOMICS					
Food Management, Production and Services	1	_	1	1	3
Total Gainful Home Economics	1	0	1	1	3
DISTRIBUTIVE EDUCATION					
Distributive Education	1	_	_	2	3
Total Distributive Education	1	0	0	2	3
SUMMARY TOTALS					
Trade/Industrial	4	4	11	9	28
Technical	2	0	2	3	7
Health	1	0	1	2	4
Gainful Home Economics	1	0	1	1	3
Distributive Education	1	0	0	2	3
Total Vacancies 1980-1981	9	4	15	17	45

9. What are your projected instructional staff requirements, both increases and decreases, for the next five years? Use the position authorizations for the school year 1980-1981 as the base year.

PROJECTED NEEDS BY YEAR

CURRICULUM	1981	1982	1983	1984	1985	Totals
TRADE/INDUSTRIAL						
Masonry		1	1	1	2	5
Automotive Mechanic	2	1	2			5
Automotive Body		1	1	1	1	4
Carpentry				4		4
Cosmetology	1	1	1		1	4
Machine Shop Practice	2	1			1	4
Mine Equipment Maintenance	4					4
Welding	2	1	1			4
Air Conditioning		1			1	2
Graphic Arts			1		1	2
Plumbing					2	2
Appliance Repair				1		1
Automotive Occupations		1				1
Building Construction Occupations			1			1
Building Trades Maintenance					1	1
Commercial Art	1					1
Diesel Mechanic					1	1
Electrical Occupations	1					1
Metal Fabrication			1			1
Total Trade/Industrial	13	8	9	7	11	48
TECHNICAL						
Electronics Technology			2			2
Scientific Data Processing			1	1		2
Drafting/Design Technology				1		1
Mechanical Drafting/Design		1				1
Total Technical	0	1	3	2	0	6
HEALTH						
Health Assistant		1				1
Medical Laboratory Assistant				1		1
Total Health	0	1	0	1	0	2

PROJECTED NEEDS BY YEAR

CURRICULUM	1981	1982	1983	1984	1985	Totals
AGRICULTURE						
Agriculture Mechanic	_	1	_	_	_	1
Total Agriculture	0	1	0	0	0	1
GAINFUL HOME ECONOMICS						
Food Management, Production and services	_	_	1	1	_	2
Total Gainful Home Ecomomics	0	0	1	1	0	2
BUSINESS EDUCATION						
Business Data Processing	1	_	_	_	_	1
Total Business Education	1	0	0	0	0	1
DISTRIBUTIVE EDUCATION						
Distributive Education	_	1	_	_	1	2
Total Distributive Education	0	1	0	0	1	2
SUMMARY TOTALS						
Trade/Industrial	13	8	9	7	11	48
Technical	0	1	3	2	0	6
Health	0	1	0	1	0	2
Agriculture	0	1	0	0	0	1
Gainful Home Economics	0	0	1	1	0	2
Business Education	0	1	0	0	0	1
Distributive Education	0	1	0	0	1	2
Total Projected Needs By Year	14	12	13	11	12	62

PROJECTED NEEDS BY CENTER

CURRICULUM	Pitt	Indiana	Penn State	Temple	Totals
TRADE/INDUSTRIAL					
Masonry			3	2	5
Automotive Mechanic	1		4		5
Automotive Body			2	2	4
Carpentry			3	1	4
Cosmetology			3	1	4
Machine Shop Practice			3	1	4
Mine Equipment Maintenance		4			4
Welding	1		1	2	4
Air Conditioning			1	1	2
Graphic Arts			2		2
Plumbing				2	2
Appliance Repair	1				1
Automotive Occupations	1				1
Building Construction Occupations			1		1
Building Trades and Maintenance				1	1
Commercial Art				1	1
Diesel Mechanic				1	1
Electrical Occupations			1		1
Metal Fabrication			1		1
Total Trade/Industrial	4	4	25	15	48
TECHNICAL					
Electronics Technology			1	1	2
Scientific Data Processing				2	2
Drafting/Design Technology			1		1
Mechanical Drafting/Design	1				1
Total Technical	1	0	2	3	6
HEALTH					
Health			1		1
Medical Laboratory Assistant				1	1
Total Health	0	0	1	1	2

PROJECTED NEEDS BY CENTER

CURRICULUM	Pitt	Indiana	Penn State	Temple	Totals
AGRICULTURE					
Agricultural Mechanic	_	_	1	_	1
Total Agriculture	0	0	1	0	1
GAINFUL HOME ECONOMICS					
Food Management, Production and Services	_	_	1	1	2
Total Gainful Home Economics	0	0	1	1	2
BUSINESS EDUCATION					
Business Data Processing	_	_	1	_	1
Total Business Education	0	0	1	0	1
DISTRIBUTIVE EDUCATION					
Distributive Education	_	_	2	_	2
Total Distributive Education	0	0	2	0	2
SUMMARY TOTALS					
Trade/Industrial	4	4	25	15	48
Technical	1	0	2	3	6
Health	0	0	1	1	2
Agricultural	0	0	1	0	1
Gainful Home Economics	0	0	1	1	2
Business Education	0	0	1	0	1
Distributive Education	0	0	2	0	2
Total Projected Needs By Center	5	4	33	20	62

10. How do you think the Department of Education, VE Personnel Development Centers (Pitt, Penn State, Indiana University, Temple) other educational institutions, etc. can be supportive of your recruitment efforts?

- Develop a good job placement service; stress pre-service training, short but intense training.
- Would hope that the 4-year program (or 5) could be more useful in meeting the need.
- Re-educate high school counselors to better counsel people re: vocational education student recruitment; put on good public relations program citing need for teachers and advantages of being a VE teacher; publicize key employment areas of VE at least 4 times a year.
- Doesn't have any say in selection process--this is vital.
- Doesn't think they could do much; possibly PR campaign to increase VE awareness and boost VE image; feels teacher shortage may occur down the road.
- Maintain current lists of available individuals; competency test lists, PR activities, need reporting of vacancies.
- Reduce fee and give trade competency exams more often.
- Top notch core programs, readily accessible.
- Reduce cost of competency test; reduce credits; viable course study; tighten up on pass/fail.
- In the same way they support academic institutions.
- Institutions have to get involved with small business/industry; make them aware of teaching option in T&I; run ads regarding teaching option in T&I; Pitt doesn't do this - need to do local advertising; "beef up" recruiting into Pitt.
- Need way to get people for substitute; broad approach to industry by institutions; be more selective in student applicants for VE; emphasize numbers not qualifications.
- Do more in way of pre-service recruitment; get industry involved in certification programs while still employed in industry; need more public awareness, public information programs for industry.
- Go to field based instruction (your more accountable but its more convenient); AVTS need to recruit people for the Centers Programs; computer based search system like Indiana.

- Provide information on potential teachers as they get it; N. Chester City is not as worried about new teachers as updating old teachers.
- Keep an up-to-date file on graduates; refer graduates to vo-tech schools.
- Better communications.
- By keeping an up-to-date listing of people looking for jobs.
- Not sure--present competency based system makes employment as a teacher the basic pre-requisite for Certification Process. It seems we recruit for the university under this program.
- Send notice to institutions which should be forwarded to prospects--qualified or on way to certification--need positive action; let directors know of persons available.
- Let us know when they have available people.
- I believe there must be better PR by both the universities and the technical schools to encourage our graduates to enter the vocational educational teaching field. No one institute can do it alone.
- Provide test frequently; continue VITAL program for new teachers.
- Continue to recruit and train vocational education teachers.
- Take action when notified of vacancies.
- Through reference upon inquiry.
- Have a job placement office for AVTS.
- Make available to the vocational-technical schools a list of those who graduate from the various vo-tech programs each year.
- Make classes available to presently employed personnel; degree programs (like Penn State): reasonable cost (federal money).
- By providing lists of potential certified applicants.
- Provide educational training which creates a pool of applicants for AVTS's to draw from.

- Publicity about vocational education teaching; recruiting from industry: remove emphasis on degree programs.
- Certify more vocational education teachers especially in the T&I area.
- Offer same services as in the past, i.e, maintain ready references of available teachers.
- Information on available persons for employment.
- Recruit candidates from industry or vocational technical schools.
- By maintaining an "updated" listing of candidates.
- Possibly by having a resource of certified people.
- Listing graduates and trade experience bi-yearly.
- Periodic listings of available individuals.
- Quit showing favoritism to certain individuals and throwing up road blocks to others.
- By keeping an updated list of prospective and qualified vocational teachers.
- Computer search for certified applicants.
- Don't chase good prospective teachers away with overwhelming requirements (give more credits for previous college courses).
- Work closely with IUP and PITT. They should constantly keep us aware of recruiting techniques, changes in program, and available candidates for job openings.
- Try to be helpful and encourage potential instructors working towards certification.
- Continued recruitment of candidates and cooperation with schools in obtaining qualified and certified prospects.
- By developing a pool of candidates in all areas. As it stands, we find the people and refer them to the university for certification and training.
- Update their obsolete lists; quiry each incoming student enrolled in vo-tech education, keep closer contact with each re: teacher vacancies.

STUDENT TRACKING

1. Do you track students after graduation?

Yes - 48
No - 5 (including two new schools)

2. How frequently are students tracked?

Once - 1 year after graduation	18
Annually, thereafter	8
Bi-annually	3
Other:	
◦ 1st and 5th year	7
◦ 1 year after graduation and the 5th year	1
◦ 1st, 3rd and 5th year	3
◦ Graduation, 5th and 10th year	1
◦ 3 months, 3rd and 10th year	1
◦ 3 months, 3rd and 5th year	1
◦ 3 months after graduation	1
◦ Every 5 years	1
◦ 1st, 5th and 10th year	1
◦ 3 years	1
◦ 6 months and 3 years	1
◦ Every three years	1

2a. In your student tracking procedure, do you determine whether the student is:

	YES	NO
Unemployed	48	
Employed in area of VE training	48	
Employed in related field	48	
Employed in an unrelated field	47	1
Enrolled in further education program	48	
In military	48	
Interest in VT teaching alternative	11	33

V. VOCATIONAL EDUCATION AWARENESS

VOCATIONAL EDUCATION AWARENESS

INTRODUCTION

A part of the study pertained to general community awareness of vocational education programs and awareness of vocational education teaching as an alternative to trade practice. The Awareness section of the AVTS Questionnaire and the AVTS Teacher Questionnaire, information received from Center directors, advisory council, craft committee, labor, and industry representatives provided information as to the present awareness efforts. In the following section, "Findings", each specific question from the AVTS Questionnaire and the results are presented, followed by the related information received from the various other sources.

FINDINGS

The AVTS Questionnaire posed the following question relative to awareness programs:

1. "What techniques are used to increase awareness of and instill confidence in the VE programs among students, parents, school administrators and staff, and the community?"

- ☐ AVTS open houses
- ☐ Project demonstrations
- ☐ School assemblies
- ☐ Student counseling
- ☐ Parent advisories
- ☐ Information releases
- ☐ Craft advisory committees
- ☐ Membership in industry associations
- ☐ Presentations to community groups
- ☐ Other

All techniques except parent advisories are being used by more than 36 (66%) of the directors to increase awareness of and instill confidence in VE programs.

AVTS open houses, used by all participating schools, is the most frequently used technique. Information releases and presentations to community groups followed very closely. The category "Other" was used to determine unique techniques used by various schools. Some of the ideas listed included a restaurant where lunch and dinner meals were prepared for the public at cost by the food services students, Bring-A-Parent to school week, employer day, and an awards program.

The frequency with which a particular school uses these techniques was not determined, but the results indicate that directors are using several different techniques to increase the awareness of and instill confidence in these vocational education programs.

A list of awareness techniques and frequency of use follows:

AVTSs USING AWARENESS TECHNIQUES

PRESENT AWARENESS TECHNIQUES	Number	Percent
AVTS open house	54	100
Information releases	46	85
Presentations to community groups	46	85
Craft advisory committees	42	78
Student counseling	39	72
School assemblies	38	70
Memberships in individual associations	37	68
Project demonstrations	36	66
Parent advisories	17	31
Other techniques used		

- Freshmen tours of schools
- Brochures and public relations releases
- Bring-A-Parent to school week
- VICA
- Student club activities
- Presentations in sending school
- Tours of school facilities by outside groups
- Memberships in related associations
- Career day once a year for prospective students
- Awards program to honor community members
- PTA meetings at the AVTS
- AVTS graduation day: employer day
- Food service students serve lunch and dinner to the public at cost
- Slide presentations
- Seminars for sending school counselors

Advisory council and craft committee responses indicated the public information effort the vo-tech schools are making is generally good. However, several people interviewed were concerned that there is still a need for more public relations work to be done in order to make industry and the community more aware of the AVTS's programs. A concern expressed was the that vo-tech is used as a dumping ground for poorer students.

Labor and industry representatives' responses indicated mixed feelings on the public information effort of AVTSs. About half of their responses indicated there was no or little public relations effort being performed by the AVTSs. The rest of the responses indicated there is generally a good feeling about the vocational-technical public relations programs.

Very little information was available on what the Vocational Education Personnel Development Centers are doing to assist the AVTSs in developing and implementing information programs directed toward enhancing the image of vocational education. Penn State indicated it will give assistance upon request from directors but does not ordinarily provide the service. Temple indicated it occassionally runs newspaper advertisements on vocational education. Pitt indicated it has sent letters to AVTS directors encouraging them to invite social and community organizations to the AVTS for presentations. Pitt also encourages directors to distribute posters and brochures on AVTS offerings.

Advisory council and craft committee representatives cited the best way to improve the awareness of and confidence in the AVTSs is to produce quality students. By providing quality students, employers would help pass the word about the school's programs. In addition, these representatives wanted to see a broader public relations campaign. Suggestions for such a campaign included slide presentations to community organizations, career days, and radio, television, and newspaper releases. Representatives also indicated more support is needed from school guidance counselors who are responsible for informing students of the opportunities available at the AVTSs.

Labor and industry representatives viewed the awareness and confidence problem as a lack of knowledge and understanding of opportunities on the part of students. Improved parent and student counseling is needed to develop a better understanding of vocational education. More tours through industry shops were also suggested as a possible way to increase student knowledge of vocational education.

The majority of the advisory council representatives indicated they participate in the public awareness activities of their AVTS. This participation includes serving as guest speakers at service clubs, disseminating information to various associations, taking students to service club meetings, and developing slide presentations for use with community groups. A large part of advisory council participation is done informally through discussions with personal contacts. Some advisory councils would like to participate in public awareness efforts but AVTS administrators have not requested their support.

Craft committees were not as active as advisory councils in the public awareness efforts. Most committees consider their role as serving the teachers of their craft rather than the AVTS as a whole.

2. "What mechanisms are used to create an awareness of vocational education teaching as an alternative to careers as trade practitioners?"

☐ Input school student counseling
☐ AVTS student counseling
☐ Parent advisories
☐ News media releases
☐ Presentations to community groups
☐ Follow-up to student placement
☐ Circulation of brochures
☐ Other

AVTS student counseling was the only mechanism used by more than fifty percent of the directors to create an awareness of vocational education teaching as an alternative to trade practice.

Twenty-two directors (41%) indicated they use student placement follow-up to create an awareness of the teaching alternative. However, when directors were asked if, during their student tracking process, they determine whether students are interested in the teaching alternative, only 11 of 44 directors (25%) answered in the affirmative. This shows an inconsistency in responses.

Listed below are the methods reported by directors to create an awareness of the vocational education teaching alternative. Some of these have only been used to a limited extent to create the desired awareness.

AWARENESS OF THE TEACHING ALTERNATIVE

MECHANISMS USED	NUMBER USING MECHANISM	PERCENT
AVTS student counseling	33	61
Student placement follow-up	22	41
Presentations to community groups	21	39
Circulation of brochures	16	30
Input school student counseling	14	26
News media releases	13	24
Parent advisories	4	7
Other:		

- Penn State's five-year vocational education degree promotional program
- VICA leaders
- Craft committees

Advisory council representatives indicated that, in general, few people are aware of the vocational education teaching option. Those who are aware learned of the option through word-of-mouth. Craft committee representatives also indicated people are not aware of the alternative of teaching to trade practice, the requirements for teaching, or the benefits of teaching.

Responses from labor and industry representatives were inconclusive. The responses implied a lack of awareness of the teaching alternative.

Currently, limited effort is being made by the Centers to create an awareness of teaching as an alternative to practicing in business or industry. Pitt indicated it has been taking some measures to create an awareness of the teaching alternative. For example, informational posters have been developed which contain business reply cards to assist individuals in obtaining further information. These posters have been distributed to businesses, industry and labor organizations and are designed to encourage skilled persons, women, and minorities to enter the field of vocational education.

Pitt also participated in a teaching awareness program sponsored by the Allegheny Advisory Council and the construction industry labor unions. An informationl release was distributed to each local of the various unions represented by the Construction Industry Cooperative Education Program. These twelve unions sent the same release to their respective members (approximately 45,000).

Pitt then made presentations at industry and union meetings. Individuals were given business reply cards and asked to respond if they wanted additional information. Response to this effort was minimal.

Penn State indicated it sponsored a similar program several years ago which also received minimal response.

Advisory council representatives cited the use of trade associations and professional societies as the best way to increase awareness and stimulate interest in the teaching alternative. Presentations at meetings, mailings to members and advertisements in journals were some of the suggestions offered. Another suggestion was that the AVTS's public relations program include an effort to create an awareness of the teaching alternative. For example, teaching alternative information would be included in public service advertisements and presentations to community organizations.

Craft committee representatives also suggested improved awareness through establishing better relations with trade associations, advertising in trade magazines and strengthening student counseling.

Industry representatives suggested using more tradespeople as guest speakers in the classroom; thus making them more aware of the teaching alternative. Another suggestion was the use of brochures to promote the teaching alternative. Labor representatives also suggested material be sent to local unions informing members of this career option.

Responses from the AVTS Teacher Questionnaire indicated a broader public relations effort is needed to increase the awareness of the teaching alternative. Suggestions for the public awareness program included newspaper, trade magazine, television, and radio advertisements; more and better publicized open house days; use of the Commonwealth's Office of Employment Services; and publication of vacancy information.

CONCLUSIONS

1. All AVTSs are engaged in efforts to increase the awareness of and instill confidence in vocational education programs. However, the degree of these efforts varies from AVTS to AVTS.

2. Neither the vocational education teaching alternative nor the requirements necessary for pursuing this alternative have been made known to the appropriate segments of the public. Therefore it is concluded that awareness efforts need to be expanded to fill these voids.

RATIONAL

All AVTSs responded positively to the use of various mechanisms to increase the awareness of and instill confidence in vocational education programs. The data indicated mechanisms are not used uniformly in that some AVTSs used more mechanisms than others and the degree to which a particular mechanism is used varies.

AVTSs' present awareness efforts have concentrated on creating awareness of and instilling confidence in the vocational education programs. These efforts have not included an awareness of the teaching alternative and have not been targeted at particular segments of the population.

Twenty-five percent of the respondent directors indicated student tracking is used to create an awareness of the teaching alternative. This indicates directors are not targeting graduates as a potential source for teachers. Labor's and industry's limited knowledge of the teaching alternative also indicate present efforts have not included special programs targeted at these specific segments of the community.

Fifty percent of the teachers surveyed indicated they became aware of the teaching alternative through personal contacts rather than through special awareness efforts. Advisory council and craft committee representatives indicated most trade practitioners have little to no knowledge of the teaching alternative, the necessary requirements, or the benefits of teaching. Responses from labor and industry representatives supported those received from advisory council/craft committee representatives.

RECOMMENDATIONS

GENERAL

The findings of this portion of the study indicate there is a need for an awareness program targeted at several specific segments of the population. It is appropriate for each AVTS to provide a comprehensive and broad-appeal awareness program. Such program should be oriented toward informing the community at large of: the objectives of AVTS programs, the scope and nature of efforts to meet needs of the students and the community, plans to revise and improve programs to meet changing needs, the need for support of all elements of the community, and the kinds of community participation needed to effectively support the AVTS. However, the substance and direction of awareness efforts need to be designed to give increased emphasis to teaching as an alternative to trades practice, requirements to become a vocational education teacher and incentives/benefits associated with teaching.

In view of the above, and recognizing that a well-rounded awareness program has multiple purposes and objectives, the recommendations which follow are oriented toward the limited objectives of increasing awareness of the teaching alternative and the requirements to pursue a vocational education teaching career. A discussion of incentives/benefits is presented in Section VI, Incentive Programs.

The objective of an awareness program developed for these areas is two-fold:

- To increase the quantity of persons interested in the teaching alternative through:
    - providing an awareness of the teaching opportunity as an alternative to trade practice
    - providing an awareness of the requirements to become a vocational education teacher.
- To increase the quality of potential teachers by the pursuit of pre-service training through:
    - non-degree certification programs
    - degree programs.

The development of an effective awareness program should include the following essential elements:

- targeting according to subject
- addressing the appropriate audience
- selecting the appropriate communication mechanism
- determining responsibility for development and implementation
- timeliness of execution
- evaluating cost vs. benefits to be derived.

To accomplish the above objective and to reach the various target segments of the population, the Pennsylvania Bureau of Vocational Education (BVE), Centers, AVTSs and their supporting organizations must participate and cooperate in the development and implementation of the awareness program.

BUREAU OF VOCATIONAL EDUCATION

The role of the Bureau of Vocational Education (BVE) should be to provide awareness programs which will communicate state-wide the availability of the teaching alternative and the requirements for pursuing this alternative. Awareness materials should identify the non-degree curriculum areas of certification and those areas with the greatest demand. Information on the curriculum areas with the most demand is not now available because vacancy and turnover data are not routinely reported by AVTSs. Centers need this information to plan recruiting efforts and to develop appropriate curricula. Since this information is needed by both the Centers and the State, it is recommended that AVTS directors report all vacancy and turnover data to their respective Centers for inclusion in the data base of the VEPS. The information from the Centers files can be compiled and forwarded to the BVE.

Awareness efforts should include information indicating a college degree is not necessary to obtain certification for many of the vocational education curriculums. Awareness materials should also indicate an individual can obtain educational training while still employed in their trade, or educational courses can be obtained after acquiring a position. Several mediums can be used to accomplish this promotional effort. To avoid duplication of time, money and effort, the BVE should be responsible for developing brochures, posters, and other materials to advertise the teaching alternative and the State teaching requirements. State sponsored public service announcements should be developed to convey this information via television, radio, newspapers, etc.

These promotional materials should be designed for distribution to the general public. The State should provide materials to the Centers, AVTSs, and Veterans Educational Representatives at all local offices of the State Office of Employment Security and other appropriate agencies or institutions for further distribution.

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT CENTERS

The role of the Centers should be a generalized role similar to the BVE's but on a regional basis and targeted at different segments of the population. Centers should concentrate their efforts on getting individuals enrolled in programs leading to certification -- pre-service and in-service. Using the vacancy and turnover data from the VEPS system, Centers can target recruiting efforts to the trade/industrial and technical areas of greatest demand.

Awareness materials need to be developed by the Centers that will supplement the BVE materials. Several mediums can be used to create this awareness. Recruitment posters with business reply cards should be developed so individuals can easily request additional information. Mailings should be sent to members of trade associations, unions, and other groups of trades practitioners. In addition, presentations can be made at meetings of these organizations. Brochures explaining the Centers' vocational education programs should be developed for distribution to Community colleges, AVTSs, input schools, vocational education student organizations and other appropriate agencies and institutions.

These materials should explain the specific educational requirements of the Center. Procedures for enrolling in pre-service or in-service training programs and the various methods in which this training can be obtained should be provided. Present incentive information, such as tuition differentials, should be included. Centers should provide information about the NOCTI examination and indicate how a teaching position can be obtained upon successful completion of this examination.

Centers must conduct these awareness efforts on a regular basis in accordance with the present and projected demand conditions.

Another role of the Centers should be to provide AVTSs with advisory services on development and implementation of an effective awareness program. Centers can provide AVTS directors with materials they have developed and assist AVTSs in developing additional materials to supplement the Center information. Centers should inform AVTS directors that these services are available.

AREA VOCATIONAL-TECHNICAL SCHOOLS

The role of the AVTS awareness program should be localized including both a specific and generalized component.

The generalized component should include the distribution of awareness program materials developed by the BVE, Centers and AVTSs. Such distribution should be to local industry, labor organizations, and other entities. Awareness promotional materials should be distributed on a personal contact basis when feasible and thereby call attention to the import of the material.

Another facet of this generalized program should include presentations to local service, trade and professional associations. At these presentations, directors should encourage assistance to enroll individuals in pre-service programs at the Centers. Names of persons who evidence interest should be forwarded to the Centers for registery in the VEPS.

As a part of the AVTS student tracking procedure, directors should determine interest of graduates in the teaching alternative. Names of interested individuals should also be forwarded to the Centers for registry in the VEPS.

Directors should encourage teachers to incorporate guest speakers from industry into their teaching plans. This provides an opportunity for industry personnel to obtain first-hand teaching experience and will aid in creating an awareness in industry of the teaching alternative. Directors should be alert to opportunities to obtain teachers through industry outplacement programs.

The generalized awareness programs should be performed on a regular basis rather than a "one-shot" highly concentrated basis.

When openings occur and AVTS directors need a specific teacher, they should clear initially with the VEPS to determine availability of candidates. If such clearance is not productive, the mechanisms mentioned in the generalized component can be repeated but related to the specific area of certification. Free public service announcements are frequently available through the various communications media to create an awareness of a specific opening. Contact should be made with Veterans Employment Representatives indicating specific present and/or potential need. Also, CETA Offices should be contacted for names of former CETA teachers. The measures taken by a director when an opening occurs should be specifically tailored to fill the position in a timely manner.

COST/BENEFIT ANALYSIS

Implementation of the preceding recommendations should not require substantial outlays of funds. Rather, the recommendations merely represent modest redirection of present public information and awareness activities to highlight from time-to-time the fact that teaching is a viable alternative to trades practice, to iterate requirements for teaching, to encourage participation in pre-service training, and to inform as to incentives and benefits of teaching.

It is possible that well conceived and executed awareness programs will produce the quantity and quality of persons desired for maintaining appropriate instructional staffs of the AVTS system.

VI. INCENTIVE PROGRAMS

INCENTIVE PROGRAMS

INTRODUCTION

A part of the study pertained to the use of incentives to recruit and retain vocational-technical teachers. The Staffing and Incentive questions of the AVTS Questionnaire and some questions presented to advisory council and craft committee members were relevant to the use of incentives. The data are suggestive, rather than conclusive, indicators of a need to strengthen incentive programs.

FINDINGS

The AVTS Questionnaire findings pertaining to staffing indicate that 69% of the position turnover occurs in the trade/industrial and technical curricula areas, and that 90% of the hard-to-fill positions are in the same curricula areas. Non-degree areas, usually heavily dependent upon recruitment from among various trade practitioners, generally represent the hard-to-fill positions. Salary and certification requirements were identified as the major deterrents to filling these positions. However, the total amount of turnover represents only about 1.4 positions per year per AVTS for all curricula which is not indicative of a major staffing problem.

The AVTS Questionnaire posed the following questions relative to incentive programs:

1. "Which of the following incentives do you use to facilitate recruitment and retention of vo-tech teachers:

- ☐ Pay for trade competency test
- ☐ Tuition reimbursement
- ☐ Pay for workshops/seminars
- ☐ Travel expense reimbursement for educational purposes
- ☐ School/Industry exchange programs
- ☐ Loans
- ☐ Time off with pay for education programs
- ☐ Other?"

2. "What incentives do you recommend to enhance recruitment and retention?"

Of the 52 directors who answered the first question, 40 (77%) indicated that tuition reimbursement and travel expense reimbursement for educational purposes were used as incentives. However, the conditions and the amount of tuition reimbursed varies considerably. Thirty-seven directors (71%) indicated their schools pay for workshops and seminars attended by teachers. Very few schools pay for trade competency tests or for school/industry exchange programs as incentives for recruitment or retention.

When asked what incentives directors would recommend for recruitment and retention, the most frequently cited responses were better salaries, pay for trade competency examinations, tuition reimbursement, and salary credit for trade experience. One school district (Philadelphia) indicated recruiting has become much easier since salary credit is given for each year of trade experience beyond the required five years. This incentive allows some teachers to start close to $20,000 and makes the teaching alternative more appealing.

The following lists the frequency of use of various incentives and the directors' recommended incentives to enhance recruitment and retention.

PRESENT INCENTIVES	NUMBER USING INCENTIVE	PERCENT
Tuition reimbursement	40	77
Travel expense reimbursement for education programs	40	77
Pay for workshops/seminars	37	71
Time off with pay for educational programs	20	38
School/industry exchange programs	7	13
Pay for trade competency tests	5	10

Other:

- Pay for tuition above certification
- Credit increments
- Salary start based on trade experience
- Time off without pay
- Provide bonus for teachers working in industry during summer ($100) 240 hours.

RECOMMENDED INCENTIVES

Following are recommended incentives as stated by various AVTS directors:

- Starting salary based on qualifications
- Some how salaries must be higher to compare with business and industry; local school boards will not deal with this problem
- Higher teacher salaries
- Better salary for starting (A Grant/Payback system might help)
- Higher starting salaries for beginning and tenured teachers
- Competency test being paid for
- Pay for trade competency tests where instructor may become certified in more than one area
- Increased benefits other than salary
- Pay tuition reimbursement locally; time back in industry with pay to upgrade
- Credit increments
- Tuition reimbursements
- Tuition reimbursement and pay increases for additional education advancement
- None - they must do everything on their own
- Get teacher trainers out of the college classrooms and into the field to find good recruits from the trades

- Would like to see an industry exchange program with some Federal and State funding; need for state in-service programs; would like pay for trade competency examination which is difficult because older teachers were not reimbursed

- I do not believe school boards can afford any additional incentives; we must strive collectively to find those dedicated people who want to teach and then support them in their shop or classroom situations (curriculum and discipline support)

- College credit for previous experiences

- Pay for trade competency test, tuition reimbursement after 12 credits; partially pay for workshops/seminars and school/industry exchange programs

- Better understanding of the benefits of a teaching career

- Eliminate occupational trade testing fees; operate field-based training for certificates

- Tuition reimbursement; pay for workshops/seminars; travel expense reimbursement for educational purposes; school/industry exchange programs; make work stations and surrounding situation good; good tools

- Play up benefits such as short working day, 10 months work, good pay

- More fringe benefits

- Pay for trade competency test to assist in personnel pool development; use AVTS to administer

- Provide increased opportunity for update and teacher training; credit toward certification for appropriate seminars, workshops

- Personal satisfaction of teaching

- State or Center possibly should pay for competency test; is an obstacle to a certain degree

- Pay trade competency test to get intern certification

Responses by advisory council and craft committee members indicated that only four of eleven advisory council members considered teacher recruitment and retention to be a problem; whereas six of eleven craft committee members considered recruitment and retention to be a problem. Council and committee members suggested the following incentives:

- Salaries competitive with industry
- More salary credit for trade experience
- Provide financial assistance for education
- Better awareness programs
- Build up benefit programs such as good work environment, short hours, job stability, summers off, pride in work, job satisfaction from working with youth
- Improve access to education.

Center representatives indicated that incentives are used to encourage potential students to enroll in curricula leading toward vocational education teaching careers. Occasionally student organizations sponsor a student desiring to pursue the teaching career and tuition reimbursement is available from some school districts. One Center representative noted that there are no real incentives; people must want to teach and benefits such as a short day, vacations, and work environment must be stressed instead of monetary rewards.

The Centers have a modest pre- and in-service incentive available in the form of a tuition differential which provides a $25 per credit reduction for courses approved by the PDE in each Center's annual plan.

CONCLUSIONS

1. Present incentive programs are provided primarily for in-service persons and thus pertain to retention and professional development considerations to the virtual exclusion of recruitment needs. This conclusion is consistent with findings which raise questions as to the magnitude of the problem of teacher recruitment for AVTSs.

2. There is mininal use of pre-service incentives. This may contribute to the inadequate supply of qualified candidates for hard-to-fill positions.

RATIONALE

Approximately three out of every four respondent schools reported using one or more of the in-service incentives. While about 90% of the hard-to-fill positions are in the trade/industrial and technical curricula areas, only five AVTS directors indicated payment for competency testing and only one school district reported starting salaries are based to some extent on trade experience. The most frequently recommended pre-service incentives were improved salaries and payment for competency tests. Thus, it appears that present pre-service incentive programs should be enhanced to be more reflective of supply and demand factors impacting on a hard-to-fill teacher position in a given hiring situation.

RECOMMENDATIONS

While the findings of this study do not reflect recruitment of vocational education teachers as being a major problem, some positions in the trade/industrial and technical areas have been identified as being hard-to-fill and persons having little or no pedagogical training are being hired. Thus, it would appear to be appropriate to develop pre- and in-service incentive programs which would facilitate recruitment, strengthen qualifications, and enhance retention for such curricula.

Incentive programs should give due consideration to supply and demand factors as pertaining to hard-to-fill positions. Effective personnel administration dictates that exceptional measures be taken to meet exceptional needs at a given point in time. Thus, AVTS administrators should establish flexible incentive policies and programs which will permit recruitment of defined quantity and quality of instructional personnel.

Flexibility implies continuing awareness of:

- those curricula which constitute the hard-to-fill instructional need
- those supply and demand factors which indicate the nature and extent of incentives to be applied in a given set of circumstances.

Implementation of the following recommendations should be supportive of efforts to strengthen AVTS instructional staffs:

1. Information pertaining to pre- and in-service incentive and benefit programs should be an integral part of the program recommended in Section V, Vocational Education Awareness.

2. Use of pre-service incentives should be based on supply and demand factors at a given point in time and reflect the inducements required to recruit an appropriately qualified person at such time. Thus, the same inducements may not be appropriate for every recruitment effort; rather, they would be related to the needs of each individual hiring effort.

3. Use of pre-service incentives should be extended and monitored closely, at least on a trial basis, to determine their impact on the quantity and quality of applicants. Such incentives should include:

- compensation recognition for experience and/or training beyond the minimum requirements for various levels of certification

- reimbursement for expenses associated with competency tests provided such tests are taken at the request of the potential employer

- grant and/or loan programs to assist interested persons to acquire pedagogical skills on a pre-service basis and incorporating a contractual obligation to teach for a specified minimum period (such programs should be limited to the eighteen credits required for the VI I certificate)

- continuation and/or extension of tuition differentials

- one-time bonus on employment.

4. The responsibility for application of pre-service incentives should be divided between the PDE and local entities as follows:

   - State
     - Grants
     - Loans, perhaps with forgiveness features
     - Tuition differentials
     - Increased contribution to competency testing
     - Tuition payments for pre-service training for hard-to-fill positions
     - Pay costs associated with pre-service orientation programs

   - Local
     - One-time bonus on employment
     - Reimbursement for trade competency testing
     - Compensation in recognition of trade experience
     - Tuition reimbursement, possibly to include retroactive considerations
     - Training travel expense reimbursement.

COST/BENEFIT ANALYSIS

The low incidence of turnover per year per AVTS and consideration of supply/demand factors impacting on a given situation would appear to indicate relatively infrequent use of pre-service incentives and thus have modest impact on AVTS budgets. The potential benefits of improved quality of teachers and better preparation of vocational education students cannot be measured in dollars. Only an on-going assessment of the performance of teachers and the acceptability and performance of AVTS graduates in their trades will provide some measure of the benefits as related to the increased cost of acquiring better qualified instructional staffs.

VII. PRE-SERVICE TRAINING

PRE-SERVICE TRAINING

INTRODUCTION

One of the problems addressed during the study was the need for a complete systematic program of formal pre-service teacher education offered at convenient locations throughout the Commonwealth for serious aspiring candidates while they are still employed in their trade. Information pertaining to present pre-service efforts was elicited from the four Centers. Pre-service training was not addressed specifically in the AVTS Questionnaire but the Staffing and Certification sections provided some input to this topic.

FINDINGS

The present need for pre-service teacher education programs was evidenced by AVTS directors' responses which indicated non-degree teachers are entering the classroom with few or no pedagogical skills. Directors have indicated they can fill positions within a reasonable period of time; however, they are not getting the quality of teacher they desire, largely due to the lack of pedagogical skills.

Pre-service teacher education can be provided in two ways:

- non-degree certification courses offered to individuals presently not teaching
- bachelor of science degree including a trade experience requirement (i.e. Penn State's five-year program)

Penn State is the only Center presently offering a BS degree program for the trade/industrial area of vocational education. This program was designed to provide individuals with both trade and pedagogical skills prior to entering the classroom. AVTSs are not realizing the full benefit of this program because many of the graduates are being recruited by industry at higher salaries. AVTS directors also cited weakness in trade skills as a problem with graduates of this program. During interviews, some directors alluded to concern by students as to the trade competency of degree trained teachers due to lack of in-depth trade experience. These concerns about trade competency may be partly attributable to the fact that the backgrounds of many AVTS directors and teachers are heavily oriented toward trade experience rather than higher education.

Present efforts to enroll individuals in pre-service training programs have not been successful. Indiana's pre-service students are completing the same learning modules as used for in-service teachers. Arrangements have been made at AVTSs for students to complete modules which require student contact or a classroom setting. Pitt offers classroom courses to pre-service students through on-campus or field-based programs. Modules are presently being developed to be used in their training programs. Penn State has concentrated its pre-service efforts on recruiting for its BS degree program. Individuals not wishing to enroll in the BS degree programs for trade/industrial areas may obtain pre-service training through field-based courses. Temple is providing pre-service training through outreach courses. Individuals do not usually stay in this program very long due to placement in a teaching position or attrition (too expensive, discover few openings exist in their field, course work is harder than expected).

Center directors indicated few incentives presently exist to encourage individuals to obtain training prior to acquiring a teaching position. The fact that some school districts provide tuition reimbursement to in-service teachers can actually serve as a disincentive to pre-service training. This may be due partially to a lack of counter-balancing pre-service incentives. Center directors also indicated that individuals may complete the pre-service training and then are unable to find a teaching position in their field. This has been attributed to two factors: the lack of mobility of individuals and/or the few number of teaching positions in a particular curriculum available each year.

The State recognizes weakness in the pedagogical skills of beginning non-degree teachers and has provided the Centers with funds to conduct a one week orientation seminar immediately prior to school openings. Participation in these seminars has been minimal thus far. Reasons for low participation include: hired too late to make plans to attend, lack of awareness of opportunity, attendance would result in loss of income, and prior commitments.

CONCLUSIONS

1. Present pre-service efforts are in the infancy stage and require futher development both in terms of substance and accessibility.
2. Current entry level non-degree teachers do not have the desired pedagogical skills, and in some instances, degree teachers do not have desired trade competency. Pre-service programs must address these issues.

RATIONAL

All Centers are presently able to offer course work on a pre-service basis; however, the stage of development of programs geared specifically to the needs of pre-service individuals varies from Center to Center. The present limited participation in these programs may be attributed to such factors as the limited use of incentives to encourage individuals to obtain pre-service training, and the disincentive of tuition reimbursement by some school districts to in-service teachers. Additionally, the lack of awareness of the teaching alternative and the lack of awareness of pre-service training programs contribute to low enrollment in the currently available pre-service programs. This is particularly true in relation to the trade/industrial and technical curricula.

Directors have indicated weaknesses in both the degree and non-degree approaches to providing pre-service educational training. This concern supports the need for further development of training prior to acquiring a position. The relatively small number of individuals presently enrolled in pre-service training indicates this problem is likely to continue unless corrective actions are taken.

RECOMMENDATIONS

All Centers presently have some method of supplying pre-service training to interested individuals. Present programs should be strengthened to meet the specific needs of pre-service individuals and give due consideration to supply/demand factors. Accessibility, timeliness, and cost are key factors to individuals wishing to obtain pre-service training while presently practicing their trade.

1. Satisfactory completion of an orientation program designed to provide some measure of preparation for the transition from trades practice to teaching should be a PDE requirement for persons having no other pre-service pedagogical qualifications. This can be accomplished through modification of the Intern certificate.

2. Efforts to strengthen the orientation programs should include:

    - provision for orientation training information in awareness and recruitment programs

    - more timely hiring to permit orientation prior to school openings and to help overcome problems related to prior commitments

    - timely and accessible offerings of the orientation program

    - pay and expense status in accord with local supply and demand factors

    - credit toward certification.

3. It is recommended that the Centers act jointly, under State auspices, to develop a competency-based vocational education program which would satisfy requirements for certification as Vocational Instructional Level I. The competencies should consist of the hard core basic subject matter considered essential to effective performance in the classroom.

4. Pre-service non-degree training programs should be made more accessible through the existing mediums of campus-based, outreach, and field-based courses. Consideration should also be given to providing the non-classroom elements of pre-service training through individualized competency-based courses. Such courses should minimize face-to-face contact. Arrangements should be made with the local AVTS to accommodate the classroom components in secondary and/or post-secondary settings.

   These programs can be made more accessible by using an appropriate mix of training locales and delivery mechanisms. Consideration should be given to such factors as the number of persons to be trained, geographic distribution of trainees, availability of trainees as related to work schedules, use of joint pre- and in-service training, and availability of classroom settings for completing the competency-based courses requiring such setting. Input and output of the VEPS should provide considerable information for pre-service program planning and execution.

5. Pre-service courses must be offered at times convenient for trades practitioners. Since most tradespeople are employed during the day, evening or Saturday courses are recommended. Demand factors should be considered when determining the frequency of presentation. If the individualized competency-based approach is used, the question of frequency is no longer a factor.

6. It is recommended that the Penn State five-year trade/industrial program be studied to determine whether and how the trade competency aspect should be strengthened. Such study should start with an examination and evaluation of the performance of graduates of this program in the AVTS system. Such review should serve to identify real and potential weaknesses to be addressed in subsequent modifications of the program. Thus, problem identification and definition would precede, and dictate to some extent, the corrective actions.

7. In an effort to increase enrollment in pre-service courses, awareness programs of the teaching alternatives and requirements should be implemented as suggested in Section V, Vocational Education Awareness. Further, incentives need to be developed which will encourage individuals to obtain pre-service training. These incentives are discussed in Section VI, Incentive Programs.

8. It is recommended that the BVE develop a statement of pre-service training policy. This statement should embrace such measures as:

   - the Commonwealth's stance as to the desireability and appropriateness of pre-service training,
   - general criteria as to content of the program,
   - the nature and extent of financial support for such programs. The State support should include application of awareness and incentive programs. Further, the State should delegate to the Centers the responsibility and authority for program development and implementation. Existing programs should be utilized to the fullest extent possible.

   The role of Centers is to:

   - provide pre-service awareness and incentive programs
   - develop and implement vocational education pre-service programs consistent with demand factors
   - work with AVTSs on recruitment of potential teachers
   - promptly register pre-service students in the VEPS.

COST/BENEFIT ANALYSIS

The obvious benefit of pre-service training is to have better qualified instructional staffs serving the AVTS system; particularly in the trade/industrial and technical curricula. Teachers' lack of pedagogical skills must be overcome if AVTS students are to have an opportunity to achieve desired levels of marketable trade skills.

Present pre- and in-service non-degree programs can be readily adapted for fuller utilization in pre-service settings. By limiting pre-service non-degree training to the requirements for VI I certificaton, and using the individualized competency-based approach, the basic level of pedagogical skills can be provided at reasonable cost even if fully subsidized. Costs to subsidize pre-service training should not be significantly higher than reimbursement for in-service training. A factor to keep in mind is that payment for pre-service training should be accompanied by a contractual agreement to serve as a full- or part-time teacher for a specified period of time.

VIII. TEACHER CERTIFICATION AND COMPETENCY

TEACHER CERTIFICATION AND COMPETENCY

INTRODUCTION

Portions of our study pertained to certification, in-service training, maintenance of pedagogical and trade skills, and teacher competency. Since these topics are interrelated, they are all discussed in this section. Information on these topics came from the following sources: the Teacher Certification and Competency section of both the AVTS Questionnaire and the AVTS Teacher Questionnaire, interviews with AVTS and Center directors, and interviews with advisory council, craft committee, labor and industry representatives.

Since the AVTS Questionnaire provided most of the information, the following section entitled "Findings", states each question from the questionnaire and the results pertaining thereto, followed by the related information received from the various other sources.

FINDINGS

1. "Are NOCTI trade competency tests reflective of current technology and methodology?"

|35| Yes |7| No

Of the 49 directors who responded to this question, 35 (62%) indicated NOCTI tests are reflective of current technology and methodology, 7 directors (14%) indicated the tests are not current and 7 directors (14%) said they did not know.

Several directors commented that the NOCTI tests for some vocational areas are out of date and need to be revised to reflect new technology and methodology. Other weaknesses cited were that trade tests are unrealistic or inappropriate and they give inaccurate results. There was some indication that an inter-state exchange or reciprocity of trade competency scores would be desireable.

The cost associated with taking the NOCTI examination was the major area of concern. Most teachers responding to this question indicated the fees were too high. It was suggested that the State or the AVTSs should pick up the cost of the examination.

Most teachers considered the written part of the NOCTI examination to be satisfactory. An area of concern mentioned was the currentness of these examinations.

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The trade demonstration part of the examination was also considered satisfactory by most teachers. Some concerns expressed about this part were: the length of time required, the lack of geographic accessibility to the test, the non-currentness of some tasks to be performed, and the scope of demonstration being either too broad or too narrow.

Accessibility to the written test was considered satisfactory, but the trade practice portion of the test was not considered as accessible.

2. " Do you require periodic technical updating to assure maintenance of trade competency? If yes, how many hours of such training are required? If yes, what mechanisms do you use?"

|11| Yes |42| No

Fifty-three directors responded to this question and 42 (79%) indicated they do not require periodic technical updating. The remaining 11 directors (21%) indicated that periodic updating is required. All 13 directors interviewed said they do not require periodic technical updating.

Most directors indicated they would like to see periodic updating required. However, they indicated mandated updating is unlikely under existing political and union thinking. Therefore, most directors strongly recommended that teachers obtain this updating voluntarily. Some directors require updating through workshops conducted by the four Centers during in-service days.

Educational institution workshops/seminars and equipment manufacturer training programs presently seem to be the most frequently used mechanisms for periodic technical updating. Several directors indicated they use in-service days to either place teachers in industry for updating or to provide in-house programs designed for technical updating. Trade practice during the summer is also used frequently for updating. One director indicated a $200 stipend is given to teachers who practice their trade during the summer.

2a. "If yes, how many hours of such training are required annually?"

- Depends on teacher and trade
- Minimum of two days
- Each trade varies
- 100 hours

2b. "If yes, what mechanisms do you use?"

Mechanisms	Number of AVTS using *
Educational institution workshops and seminars	16
Equipment manufacturer training program	16
Summer trades practice	13
Industry training programs	10
School/industry instructional staff exchange	1
Other:	

- Voluntary trade practice during the summer--paid a $200 stipend
- Personal interest and application research
- Two in-service days used for trade practice in industry

* Some directors who do not require periodic technical updating checked the mechanisms used voluntarily by teachers.

To assist vocational education teachers in maintaining a high level of occupational knowledge and skills, the Centers, through State assistance, have joined efforts to organize, plan, and conduct technological updating workshops for teachers. These workshops are designed for CETA and vocational teachers. Funding is 80% CETA and 20% State. The anticipated reduction in Federal funding of CETA may have an adverse impact on this program. Access to these workshops by AVTS teachers is limited because 25% of the slots are reserved for CETA teachers and the workshops are also open to vocational education teachers from comprehensive schools.

Persons from business and industry will be recruited to assist educators in the conduct of workshops. Topics are determined through surveys of teachers of the various curricula areas as well as teachers of closely related occupations.

Participants are asked to submit to the sponsoring Center an evaluation of the workshops and recommendations for future workshops. As an incentive, a stipend is paid to all participants. This includes travel, lodging, meals and honorarium in-lieu-of daily salary when salary is not being received.

Workshops are scheduled from March through August 1981, with enrollments limited to approximately 25 participants per workshop. Workshops conducted in March were oversubscribed. Even though current workshops were oversubscribed, the total number of teachers accessing the workshops is a relatively low percentage of all teachers in the particular curriculum.

3. "Do you require periodic re-testing for trade competency?"

All 52 directors who responded to this question indicated they do not require periodic re-testing for trade competency. Comments by two directors indicated this to be a good idea and should be done.

Advisory council representatives, in general, believe vocational education teachers are not required to stay current technologically or pedagogically, but indicated such a requirement is desirable.

Craft committee representatives, in general, also believe teachers are not required to stay current technologically or pedagogically. Representatives indicated some teachers voluntarily stay current; in some instances, the craft committees help teachers in these efforts. Most craft committee representatives would like to see this updating be required. Those few who indicated the requirement was not necessary cited the following reasons:

- if teachers are interested in their career they will do it on their own
- skills stay the same in certain areas, only materials used in applying the skills change
- teachers should stay in touch with people hiring students and know what skills industry needs and wants.

All Centers indicated they are in favor of a requirement for periodic recertification of teachers to assure maintenance of trade competency and pedagogical skills. Centers indicated they have been urging teachers to obtain this updating, but have had little success. Center representatives indicated this mandate would have to come from the State Department of Education.

4. "Do you use other testing mechanisms to supplement NOCTI testing for teacher selection?"

|3| Yes |48| No

Of the 51 directors who responded to this question, 48 (94%) indicated they do not use any additional testing mechanisms. Three directors indicated the school district has its own tests. Two of these schools are in the Philadelphia School District which tests all teachers coming into the district. The other school, Cumberland-Perry, has its own competency test which supplements NOCTI.

Most directors do not use formal tests to supplement NOCTI examinations, but contact former employers, personal references, and educational institutions to aid in teacher selection. One director indicated that advisory council recommendations are also used. In addition, State examinations are used when NOCTI examinations do not exist.

5. "If your response to the above question was yes, do you think such additional testing serves to deter potential applicants?"

|0| Yes |3| No

Directors using supplementary testing mechanisms (Question #4) indicated that additional testing does not deter potential applicants.

6. "Do you require periodic accredited training after attainment of permanent certification to assure maintenance of pedagogical skills?"

|0| Yes |50| No

The fifty directors who responded to this question said that periodic accredited training after permanent certification is not required to insure maintenance of pedagogical skills. A few directors indicated that they encourage it, but cannot require it.

7. "What is your level of satisfaction with present certification requirements? Check one satisfaction level for each certification level: Intern, Vocational Instructional Level I (VI I), Vocational Instructional Level II (VI II), Supervisor Vocational Educational I (SVE I), Supervisor Vocational Education II (SVE II), Supervisor Trade and Industrial Educational (S T&I), Director Vocational Education (DVE)."

	Levels of Certification						
Levels of Satisfaction *	Intern	VI I	VI II	SVE I	SVE II	ST&I**	DVE
O.K. as is	38	32	32	25	27	29	33
Too heavy on formal education	1	5	6	7	6	6	5
Too heavy on trade experience	0	0	0	1	1	2	1
Insufficient formal education	6	8	8	4	5	5	3
Insufficient trade experience	4	4	4	2	1	1	1

* Total responses for each level of certification are not equal since some directors did not respond to all levels of certification.

** The ST&I certificate is no longer being used.

More than 60 percent of the directors who responded to this question were satisfied with the amount of formal education and trade experience required for all levels of certification.

Thirty-eight (78%) of the directors believe the requirements for the intern certification to be satisfactory. However, directors indicated some dissatisfaction in that formal education and/or trade experience required is insufficient. Directors indicated teachers are entering the classroom with inadequate pedagogical preparation.

The percentages for the levels of satisfaction for the Vocational Instructional Level I and II certificates are within 1 percentage point of each other. Thirty-two directors (65%) indicated requirements for these levels were satisfactory. The amount of formal education required was considered insufficient by eight directors (16%); however, five (10%) of the directors indicated the formal education requirement was too heavy.

Many directors indicated requirements for Supervisor Vocational Education I and II are not strictly enforced and that the requirements are inconsistently applied from school to school. Directors also indicated that universities do not have their programs in place for the certification changes which event into effect in September 1980. Only Temple has program approval for this level of certification thus far.

Thirty-three (77%) of the directors indicated the requirements for the Director of Vocational Education certification were satisfactory. Five (15%) of the directors indicated there was too much formal education required. Most of the complaints voiced for the Director of Vocational Education certificate were the same as those for the Supervisor of Vocational Education I and II. Directors also indicated the requirements were not consistent from school to school and the universities do not have their programs ready for the new certification requirements.

Other comments by directors included:

- education requirements hinder older people from obtaining certification
- formal education is weak on teaching skill requirements, includes to many "mickey mouse" courses, and has too much redundant course work
- would like to see more in-service and practical work rather than formal education.

8. " In your opinion, are curriculum areas for certification defined:

|35| Properly |8| Too Broadly |10| Too Narrowly

Of the fifty-three directors who responded to this question, 35 (66%) indicated the curriculum areas for certification are defined properly. Of the remaining 18 directors, 10 (19%) indicated the curriculum areas were defined too narrowly while 8 (15%) indicated the curriculum areas were too broad. Several directors indicated that this depends on the individual curriculum area and the school which offers the curriculum.

9. "Should credit toward certification be given for attendance at Department of Education approved seminars and workshops?"

|33| Yes |18| No

Thirty-three (65%) of the directors indicated that credit toward certification should be given for attendance at seminars and workshops approved by the Department of Education. Eighteen (35%) responded that no such credit should be given; the main objection being that many seminars and workshops are not job related and have little value. As indicated in Question #2 above, the State has recently taken measures to aid Centers in developing meaningful seminars/workshops to upgrade teachers' occupational skills. Credit toward certification may be obtained for participation in these programs.

10. "What are your recommendations for revising certification requirements, by level of certification?"

Responses to this open-ended question resulted in many comments, all of which are presented below. Many comments dealt with the content of the courses required for certification. Directors indicated courses should be more practical and directed toward real teaching situations and problems. Several directors indicated more in-service training in pedagogical skills and a longer student teaching experience would be beneficial. There were also several comments from directors showing concern about the requirements for emergency certification and substitutes.

AVTS DIRECTORS' COMMENTS:

General

- More in-service training directed toward real teaching situations and problems; lighten-up on formal education and give more practical courses; more hands-on courses
- Give authority back to PDE for certifying directors/supervisors; more standardization
- Credit requirements OK; need subject matter to be more substantive and job related
- "Beef up" courses
- Get the Board to recognize the fact that certification for vocational education is totally different than that for academic certification
- Need revision of daily substitute emergency certificate; too complicated; too much paper work

- Require periodic work experience to keep current
- The administrative certificate requirements are archaic, narrow and self-perpetuating
- Keep emphasis on work or trade experience
- Two years trade experience beyond the learning period at all levels
- Require more journeymen trade experience; provide more direct vocational teacher training
- More in-service credits given locally; more observation and credit for on-the-job training
- The VAP has given many recommendations--does anyone listen?
- Become more club oriented (i.e. VICA)
- Recent changes in one year emergency certificates create a problem
- T&I should be a degree program
- Proper input from people operating vocational programs as opposed to ivory tower personnel

Intern Certificate

- Basic course in methods
- Intern as presently written does not require any specific trade experience
- More emphasis on the pedagogical skills, possibly longer practice teaching

Vocational Instructional I

- Strengthen education and experience for VI I
- Delay general education and professional courses to VI II; emphasize the teaching procedures, curriculum level, shop keeping, etc. during VI I training
- To acquire VI I certification a candidate should do more student teaching with a master teacher

Vocational Instructional II

- Prepare and implement a complete course of study in his/her trade
- Increase credits and expand over longer period of time
- Lower basic credit for VI II provided on-going additional credits are required

Supervisor Vocational Education through Director Vocational Education

- No longer a "ladder effect"; should not have to choose between supervisor or director: supervisor should lead to a director's position
- Director certification should be different; like a principal certificate but really is more; in between principal and superintendent; director certificate should be equivalent to assistant superintendent

TEACHERS COMMENTS

- More understanding of the actual job; more courses on pupil understanding
- Modules being taken by instructors should be evaluated by a person in the trade field
- Recertification is ridiculous: do doctors get recertified; would it be good to waste a teacher's time by having him/her attend classes on subjects in which they are already proficient
- Have instructor's competency test administered at his site by a certified floating instructor; instructor should complete a project requiring use of the latest equipment and methods at his convenience or during in-service days
- Periodically, the instructor should be required to take courses or otherwise subscribe to a form of updating materials and techniques

ADVISORY COUNCIL/CRAFT COMMITTEE COMMENTS

- Teachers should have more exposure to the latest technology
- Courses appear to lack substance for classroom applicability
- More weight on trade experience
- Trade experience requirements should be spelled out by curricula
- Too many "how to teach" courses; should be broader education
- Courses too simple
- Too many "hocus pocus" courses have to be taken (i.e. how to run a projector); both trade and teaching skills are important but courses required are not always that relevant
- Too much education required
- Need merit system to support credit system
- More pre-service courses, like student teaching, to ensure the individual is capable of teaching the particular trade
- Trade experience is very important: how much depends on the particular curriculum
- Trade experience very important

CENTER DIRECTORS' COMMENTS

- Too many "mickey mouse" courses offered for credit
- Revise certification more frequently

11. "How do you rate higher education programs required for vocational education certification on the following factors?"

Factor *	Ratings		
	Excellent	Adequate	Inadequate
Quality:			
Course content	7	33	11
Presentation methodology	6	31	12
Frequency of presentation	5	29	18
Geographic accessibility	12	28	13
Totals	30	121	54

* Total responses for each factor are not equal since some directors did not respond to all factors.

Directors rated the higher education programs required for vocational education certification as adequate on all four factors. The geographic accessibility factor reflects a bell-shaped curve whereas the other factors are skewed toward the inadequate rating.

In response to a similar question, nine out of fourteen teachers indicated the required courses for certification were relevant to the classroom setting. Others indicated a limited number of courses were useful in the classroom, and a few indicated that none of the courses were relevant.

Teachers were also asked whether the accessibility of programs offered by the Centers encourages or deters potential instructors from obtaining certification. Responses were split about equally between encouraging or deterring. Those that indicated the accessibility of the Centers programs encouraged individuals to obtain certification spoke highly of the field-based and modular methods of instruction. Those teachers who indicated accessibility deterred individuals from obtaining certification indicated too much time and distance was involved to enroll in courses. Other deterrents were: lack of uniformity and consistency of course work required by the Centers, unanswered correspondence, lack of interstate certification exchange, and length of time required to obtain certification.

AVTS DIRECTORS' COMMENTS ON HIGHER EDUCATION PROGRAMS

Course Content

- "Mickey mouse" courses
- Too teacher discretionary - mandate course content
- Indiana courses more responsive; Pitt permits teachers to decide course content
- Center instructors need to go back to AVTS's to see what is happening in the classroom
- Vocational education courses could be better if separated from general school of education (PSU is pretty good)
- Temple - some good, some bad
- Transition training by Penn State is good

Presentation Methodology

- Use lecture method, but teach instructors not to lecture
- Like Temple's VITAL program
- Prefer module approach
- Like Indiana's competency-based training
- Does not like lecture method for teaching instructors to teach in competency-based mode; Pitt teaches many courses by lecture method
- Need more variety
- Competency-based program better
- Temple using television to record presentation

Frequency of presentation

- Courses not offered frequently enough
- Courses are sometimes out of syncrinization

Geographic Accessibility

- Program offerings are not close enough to the teachers
- Field-based programs provide more accessibility

CONCLUSIONS

1. Certain aspects of the certification requirements are deterring individuals from entering the teaching profession and subsequently obtaining certification; i.e. length of time required, cost of education, accessibility to courses, lack of reciprocity with other states.

2. Present certification requirements effectively address trades competency in that potential vocational education teachers must successfully complete the trade competency test for their trade. However, present non-degree certification requirements do not impose a minimal competency level for pedagogical skills.

3. A major portion of the subjects presented in in-service training programs for permanent certification are not targeted to the extent desired to provide teachers with meaningful training which is applicable in the classroom.

4. Present certification does not require maintenance of trade and pedagogical skills; further, present incentive systems are not adequate to encourage updating of competencies.

RATIONALE

In the Staffing section of the AVTS Questionnaire, directors cited certification requirements as the second highest reason for having difficulty in filling positions. Directors indicated the length of time required to obtain the Vocational Instructional Level II (VI II) certificate as one possible cause for this difficulty. This is particularly true of older individuals who are interested in teaching as a second career. Course work must be obtained during evenings or summers which usually means only three or four courses can be completed during a year (six to twelve credits). Assuming six to twelve credits are earned yearly, the VI II would require five to ten years to complete. In addition to completing course work for certification, teachers are encouraged to participate in activities, workshops or programs intended to help maintain technical and pedagogical competencies. Participation is voluntary and usually such training does not qualify for certification credit. Technical and pedagogical skills updating is desireable, but tends to increase the length of time needed to attain the VI II certificate. The frequency and timing of courses offered were also cited as factors which increase the amount of time needed to acquire the VI II certificate.

The costs incurred to obtain the course work for the VI II was another deterrent to obtaining certification. Tuition reimbursement policy varies from school district to school district. In school districts that do not provide tuition reimbursement, cost was considered a deterrent even though tuition differential is available to all individuals for required vocational education courses. However, approximately half of the 60 credits required for the VI II are not eligible for the tuition differential. In addition to tuition, travel costs and the cost of books and other required materials are increasing. Another expense incurred to obtain certification is the fee for taking the NOCTI examination. Many directors and teachers indicated this can serve as a deterrent. When considered separately these various costs may not appear to be high. However, when added together they become significant and deter participation in both pre- and in-service training.

Directors cited lack of pedagogical skills as the second most prevalent reason for involuntary turnover. This may partially be attributed to the fact that directors consider course content weak and indicated subject matter should be more substantive and job related. This fact is supported by teachers suggestions to direct more courses at real teaching problems and situations as evidenced by certification requirements: i.e. 24 vocational education, 24 general education and 12 electives.

Geographic accessibility was cited by directors as a deterrent to obtaining certification. Teachers also indicated too much travel was required to obtain the course work.

A few teachers and directors indicated the lack of reciprocity of NOCTI examination scores and courses completed in other states is a deterrent to obtaining Pennsylvania certification. The NOCTI examination is a national examination and having to repeat the examination is considered frustrating and a waste of time and money. In a like manner, the repeating of courses completed in other states is considered unnecessary.

Presently, teachers are encouraged but not required to obtain technical and pedagogical skills updating; however, few directors reported using incentives to encourage teachers to acquire this updating. Representatives from advisory councils, craft committees, labor, and industry cited lack of technical update as a weakness of teachers. This indicates teachers are either not updating their skills or are not using effective methods to update their skills. Teachers were asked to list methods they use to maintain currency in technical and pedagogical skills. Responses indicated a variety of measures are used to stay current. While most teachers indicated updating to be essential and seek ways to maintain competencies, some teachers indicated updating is not necessary and do not take advantage of opportunities.

RECOMMENDATIONS

The findings of this portion of the study indicate several aspects related to certification and teacher competency need to be addressed. These areas include: requiring some degree of pedagogical skills prior to entering the classroom, time frame for completing the VI I and II levels of certification, and assuring maintenance of trade and pedagogical skills after initial competency assessment. To address the above concerns, it is recommended that:

1. The one-week orientation programs designed by the Centers should be mandatory for all beginning teachers who have had no pedagogical training. Also, orientation training should be eligible for credit toward certification. This would insure that all beginning teachers have some degree of pedagogical skills prior to entering the classroom. In addition, this would reduce the amount of non-credit training and at the same time help to shorten the time frame for acquiring certification.

2. Present requirements for the Vocational Instructional II certificate should be critically evaluated to determine whether the present 60 credits are appropriately addressing the classroom needs of vocational education instructors. Consideration should be given to the development of a more defined structure of specific tasks to be completed and the possibility of modifying the number of credits required.

3. In addition to certification requirements, a provision for on-going maintenance of trade and pedagogical competency is needed. This should be accomplished through requiring a specific number of continuing education hours be completed within a specified number of years (i.e. accounting profession requires forty hours per year). If the continuing education requirements are not met, certification should be suspended or revoked. The importance of this on-going continuing education requirement has been recognized by several other professions, such as the accounting, medical, and legal professions.

4. Workshops, seminars, and other training programs, approved by the PDE, designed for updating trade competencies should be applicable toward the continuing education requirements stated in recommendation 3 above.

5. Reciprocity should be granted for successful completion of NOCTI examinations taken in other states.

6. The awareness programs of the teaching alternative should include information on the orientation programs and the continuing education requirements proposed in recommendation 3 above.

   In addition, use of incentives should be considered, in accordance with supply/demand factors, for attainment of these programs.

7. The BVE's role should include:

   - establishing a task force to evaluate the present requirements for the VI II to determine:
     - whether present courses can be redesigned to focus more specifically on pedagogical skills required in the classroom
     - whether credit requirements for certification can be modified as a result of course redesign and/or continuing education requirements
   - setting the general criteria for content of orientation programs
   - a statement on the Commonwealth's stance as to the desirability and appropriateness of continuing education requirements to include:
     - development of general criteria for content of continuing education
     - responsibility and authority for developing and implementing continuing education courses, workshops and seminars
     - determination of the nature and extent of funding to support continuing education
   - developing and implementing the continuing education requirements within a one-year time frame

The Centers' role should include:

- participation in the evaluation of the VI II certification requirements
- a joint effort to develop standards and requirements for the orientation program
- development of courses, workshops and seminars to meet State guidelines for the continuing education requirements.

The role of AVTSs should include:

- participation in the review and evaluation of existing orientation programs and VI I AND VI II certification requirements
- providing input as to content of:
  - orientation programs
  - requirements for certification
  - continuing education programs
- consideration of use of incentives consistent with supply/demand factors.

COST/BENEFIT ANALYSIS

The primary benefit of the preceding recommendations is to have better qualified instructors who remain up to date in both technical and pedagogical skills after initial competency assessment. In addition, by shortening the length of time required to obtain certification and increasing the types of programs eligible for certification credit, it is possible that the quantity of persons pursuing certification will increase.

Implementation of these recommendations should not require a substantial outlay of funds. The recommendation of a continuing education program would require the most funding but should be accomplished at a reasonable cost. Through some redirection of present funding the amount of additional funds needed should be minimized.

APPENDIX I

VOCATIONAL EDUCATION PERSONNEL SYSTEM

DATA COLLECTION MECHANISMS

A. AVTS Questionnaire (9/80)

B. AVTS Teacher Questionnaire (12/80)

C. Interview Guidelines for Advisory Councils/Craft Committees (9/80)

D. Interview Guidelines for Labor & Industry (9/80)

E. Interview Guidelines for Vocational Education Personnel Development Centers (9/80)

APPENDIX I-A

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS QUESTIONNAIRE (9/80)

IDENTIFICATION INFORMATION:

School Name: ______________________________ Telephone Number: ______________ Original School Opening Date: __________

Respondent's Name and Title: ____

LABOR MARKET ANALYSIS:

1. Has a survey of labor market needs been performed in the last:

☐ Year ☐ 2 years ☐ 3 years ☐ Other ______________ years?

2. How frequently is this survey updated?

☐ Never ☐ Annually ☐ Bi-annually ☐ Other, specify ______________

3. Who performs the survey?

☐ AVTS Staff ☐ Local VE Advisory Council ☐ Craft Committees

☐ Community Representative Task Force ☐ Outside Consultants

☐ Other, specify ______________________________

4. How are the results of the survey used to respond to labor market needs?

☐ Add or delete curriculum ☐ Modify course content ☐ Counsel students ☐ Change instructional staffing ☐ Modify facility and/or equipment ☐ Provide public information programs ☐ Develop long-range plans ☐ Other ______________________________

STAFFING:

1. What has been your staff turnover experience (for both voluntary and involuntary separations) for each of the last three years, by curriculum as identified for certification purposes?

Curricula	Number Departed					
	1978		1979		1980	
	Vol	Invol	Vol	Invol	Vol	Invol
Totals						

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS QUESTIONNAIRE (9/80) (CONTINUED)

STAFFING (Continued):

2. To what do you attribute the voluntary or involuntary turnover in the above areas? Rank the following reasons for leaving; 1 being the most prevalent reason:

Voluntary

___ Retirement
___ More money
___ Better benefits
___ Administrative hassles
___ Move to other school
___ Higher education
___ Dissatisfaction with job environment
___ Limited advancement opportunity
___ Family and/or personal reasons
___ Other ______________________

Involuntary

___ Budget cuts
___ Declining enrollment
___ Curriculum deletion due to reduced labor market demand
___ Lack of pedagogical skills
___ Inadequate attention to administrative matters
___ Inability to establish and maintain effective working relationships
___ Other ______________________

3. Have certain positions been more difficult to fill than others?

☐ Yes ☐ No

If yes, list the difficult-to-fill positions, beginning with the most difficult.

1. ________________ 3. ________________ 5. ________________

2. ________________ 4. ________________ 6. ________________

4. For each of the difficult-to-fill positions listed above, what is the average number of months from the date of awareness of vacancy to the date the position is filled?

1. ________________ 3. ________________ 5. ________________

2. ________________ 4. ________________ 6. ________________

5. Why has recruitment for these positions been difficult?

☐ Salary ☐ Certification requirements ☐ Lack of incentives

☐ Limited advancement opportunity ☐ Trade competency requirements

☐ Reluctance to move ☐ Other ______________________

6. Which do you consider to be viable sources of vo-tech teachers for the trades and industries curricula?

☐ Teachers trained for other than vo-tech ☐ Degree programs in vocational education ☐ Trade/Industry ☐ Military ☐ Other ________________

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS QUESTIONNAIRE (9/80) (CONTINUED)

STAFFING (Continued):

7. Which of the following mechanisms have you used to recruit vo-tech teachers?

☐ Classified ads ☐ Colleges and Universities ☐ Advisory Council

☐ Craft Committees ☐ Employment agencies ☐ Personal Contacts in Industry ☐ Community Personal Contacts ☐ Other Vo-Tech Schools

☐ Vo-tech graduate tracking ☐ Other ______________________

Of the items checked, list the three most effective mechanisms:

1. ______________ 2. ______________ 3. ______________

8. What were your instructional staff vacancies as of the commencement of the 1980-81 school year?

Curricula	Number of Vacancies

9. What are your projected instructional staff requirements, both increases and decreases, for the next five years? Use the position authorizations for the school year 1980-81 as the base year.

	Number Needed				
Curricula	1981	1982	1983	1984	1985

10. How do you think the Department of Education, the VE Personnel Development Centers (Pitt, Penn State, Indiana University, Temple), other educational institutions, etc. can be supportive of your recruitment efforts?

____

____

____

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS QUESTIONNAIRE (9/80) (CONTINUED)

INCENTIVES:

1. Which of the following incentives do you use to facilitate recruitment and retention of vo-tech teachers?

   ☐ Pay for trade competency test ☐ Tuition reimbursement ☐ Pay for workshops/seminars ☐ Travel expense reimbursement for educational purposes ☐ School/industry exchange programs ☐ Loans ☐ Time off with pay for educational programs ☐ Other ______________________________

2. What incentives do you recommend to enhance recruitment and retention?

   ____

   ____

TEACHER CERTIFICATION AND COMPETENCY:

1. In your opinion, are the NOCTI trades competency tests reflective of current technology and methodology? ☐ Yes ☐ No

   If no, identify major areas of weakness: ______________________________

   ____

2. Do you require periodic technical updating to assure maintenance of trade competency? ☐ Yes ☐ No

   If yes, how many hours of such training are required annually? ________ hours

   If yes, what mechanisms do you use?

   ☐ Summer trades practice ☐ Educational institution workshops and seminars ☐ School/industry instructional staff exchange programs ☐ Equipment manufacturer training programs ☐ Industry training programs ☐ Other ______________________________

3. Do you require periodic re-testing for trade competency? ☐ Yes ☐ No

4. Do you use other testing mechanisms to supplement NOCTI testing for teacher selection? ☐ Yes ☐ No

   If yes, identify such tests: ______________________________

   ____

   ____

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS QUESTIONNAIRE (9/80) (CONTINUED)

TEACHER CERTIFICATION AND COMPETENCY (Continued):

5. If your response to the above question was yes, do you think such additional testing serves to deter potential applicants? ☐ Yes ☐ No

6. Do you require periodic accredited training after attainment of permanent certification to assure maintenance of pedagogical skills? ☐ Yes ☐ No

7. What is your level of satisfaction with present certification requirements? Check one satisfaction level for each certificate level: Intern, Vocational Instructional Level I (V.I. I), Vocational Instructional Level II (V.I. II), Supervisor Vocational Education I (S.V.E. I), Supervisor Vocational Education II (S.V.E. II), Supervisor Trade and Industrial Education (S.T&I), Director Vocational Education (D.V.E.).

Level of Satisfaction	Levels of Certification						
	Intern	V.I. I	V.I. II	S.V.E. I	S.V.E. II	S. T&I	D.V.E.
O.K. as is							
Too heavy on formal education							
Too heavy on trade experience							
Insufficient formal education							
Insufficient trade experience							

8. In your opinion, are curriculum areas for certification defined:

☐ Properly ☐ Too broadly ☐ Too narrowly

9. Should credit toward certification be given for attendance at Department of Education approved seminars and workshops? ☐ Yes ☐ No

10. What are your recommendations for revising certification requirements, by level of certification?____

____

11. How do you rate higher education programs required for vocational education certification on the following factors?

Factor	Ratings		
	Excellent	Adequate	Inadequate
Quality: Course content			
Presentation methodology			
Frequency of presentation			
Geographic accessibility			

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS QUESTIONNAIRE (9/80) (CONTINUED)

VOCATIONAL EDUCATION AWARENESS:

1. What techniques are used to increase awareness of and instill confidence in the VE programs among students, parents, school district administrators and staffs, and the community?

☐ AVTS open houses ☐ Project demonstrations ☐ School assemblies

☐ Student counseling ☐ Parent advisories ☐ Information releases

☐ Craft advisory committees ☐ Membership in industry associations

☐ Presentations to community groups ☐ Other________________

2. What mechanisms are used to create an awareness of vocational education teaching as an alternative to careers as trades practitioners?

☐ Input school student counseling ☐ AVTS student counseling

☐ Parent advisories ☐ News media releases ☐ Presentations to community groups ☐ Follow-up to student placement ☐ Circulation of brochures ☐ Other________________

STUDENT TRACKING:

1. Do you track vo-tech students after graduation? ☐ Yes ☐ No

If yes, how frequently? ☐ Once - 1 year after graduation ☐ Annually thereafter ☐ Bi-annually, thereafter ☐ Other________________

2. In your student tracking procedure, do you determine whether the student is:

	Yes	No
Unemployed	☐	☐
Employed in area of VE training	☐	☐
Employed in a related field	☐	☐
Employed in unrelated field	☐	☐
In military service	☐	☐
Enrolled in further education programs	☐	☐
Interested in vo-tech teaching alternative	☐	☐

RECOMMENDATIONS FOR A VOCATIONAL EDUCATION PERSONNEL SYSTEM:

What are your suggestions for a personnel system to help you maintain appropriate instructional staffs?________________

____

If additional space is needed, use the blank pages number 7 and 8. Identify the section heading and question number such as:

Staffing - 1
- 10
Incentives - 2

APPENDIX I-B

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS TEACHER QUESTIONNIARE (12/80)

IDENTIFICATION INFORMATION:

School Name: ______________________ Trade/Industry Area:

__________________________________ ______________________________________

Age: Under 30	________	41-45	________	over 55	________
30-35	________	46-50	________		
36-40	________	51-55	________		

BACKGROUND INFORMATION:

1. When did you begin your teaching career in the Trades & Industries (T&I) component of Vocational Education? ____________________

2. Are you tenured? Yes _________ No _________

3. Type of certification held: Date of certification:

   a. Vocational Instructional Intern ______________ ____________________

   b. Vocational Instructional I (Provisional) __________ ____________________

   c. Vocational Instructional II (Permanent) __________ ____________________

   d. Other ____ ____________________

4. Date passed competency test ____________

CAREER INFORMATION:

1. What motivated you to become a T&I teacher?

2. How did you become aware of the job opportunity available at your school?

Classified ads	____________	Colleges & universities	________
Employment agency	____________	Craft committees	________
Personal contacts in industry	____________	Community personal contacts	________
Other Vo-tech school	____________	Vo-tech graduate tracking	________
Advisory Council	____________	Other	________

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS TEACHER QUESTIONNAIRE (12/80) (CONTINUED)

CAREER INFORMATION (Continued):

3. How can Vo-tech schools make other people more aware of T&I teaching opportunities?

4. What mechanisms can vo-tech schools use to recruit T&I teachers?

5. What are the key factors that prevent an individual from becoming a T&I teacher?

6. What suggestions do you have to overcome the above deterrents you listed in item 5?

CERTIFICATION & COMPETENCY EXAMINATION REQUIREMENTS:

1. Does the accessibility of the programs offered by the Vocational Education Personnel Development Centers (Pitt, Penn State, Indiana, Temple) encourage or deter potential instructors from obtaining certification? Explain.

2. Are the courses offered by the Centers to attain certification relevent to the classroom setting and do they enhance your ability as a teacher? Explain.

3. What methods do you use to maintain technical and pedagogical competencies?

CERTIFICATION AND COMPETENCY EXAMINATION REQUIREMENTS (Continued):

4. Should periodic technical updating be required to assure maintenance of trade competency? Explain.

5. Should periodic re-certification of teachers be required to assure currency of knowledge and skills?

   Yes __________ No __________ Frequency __________ yrs.

6. What recommendations, if any, do you have for revising the certification requirements?

7. What are your thoughts about the National Occupational Competency Testing Institute's (NOCTI) competency examinations - relevancy, currency, scoring, general administration, etc?

   a. written

   b. trade competency

   c. accessibility

   d. fees and expenses for examination

PERSONNEL SYSTEM:

1. Would you be interested in knowing about opportunities in other vocational education schools? Yes __________ No __________

   If yes, would you be willing to place your name in a statewide computerized personnel system which matches qualified individuals with opportunities?
   Yes __________ No __________

2. What suggestions do you have concerning the establishment of a computerized personnel system?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

AVTS TEACHER QUESTIONNAIRE (12/80) (CONTINUED)

Please use this page for any additional comments or recommendations you may have. If your comments relate to a specific item on this questionnaire, please identify the item.

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

ADVISORY COUNCILS/CRAFT COMMITTEES

(9/80)

GENERAL:

1. What are the goals and objectives of your council/committee?

2. What are the major council/committee functions?

3. What kinds of people serve on the council/committee?

   How are they selected?

   How long do they serve?

4. How often does your council/committee meet during the year?

LABOR MARKET ANALYSES:

1. Are labor market analyses used by your AVTS?

2. If so, do you participate in the analyses?

   What is your role (survey community needs, identify labor market trends and manpower demand, etc.)?

3. How are these labor market analyses used by the schools?

   by industry?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

ADVISORY COUNCIL/CRAFT COMMITTEES
(CONTINUED) (9/80)

LABOR MARKET ANALYSES (CONTINUED):

4. When was the last analyses done?

5. How frequently are they updated?

VOCATIONAL EDUCATION INSTRUCTIONAL STAFFING:

1. Do you think the vocational education teachers possess the necessary trade and teaching skills?

2. What are the teachers strengths and weaknesses as you see them?

3. Are teacher selection criteria currently in place at the AVTS?

   If so, what are they?

4. If a yes response is given to question #3, who established these criteria?

   a. Do you assist in the development of teacher selection criteria? If so, what is your role?

5. If a no response is given to question #3, do you think teacher criteria should be established?

   a. What do you think these criteria should be?

   b. How could you help in the development of teacher selection criteria?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

ADVISORY COUNCILS/CRAFT COMMITTEES
(CONTINUED) (9/80)

VOCATIONAL EDUCATION INSTRUCTIONAL STAFFING (CONTINUED):

6. Do you think there is a problem recruiting and maintaining qualified VE teachers?

   If so, what is the problem as you see it?

7. Do you participate in recruiting VE teachers?

   If, so, what is your role?

8. If a yes response is given to #6, what are your recommendations for resolving the staffing problem?

   Sources of VE teachers?

   Incentives offered to potential VE teachers?

TEACHER CERTIFICATION AND COMPETENCY:

1. What are your thoughts on teacher certification? (Appropriate? Too much education required? Too little education required? Too much trade experience required? Too little trade experience?)

2. Are VE teachers required to stay current technologically and pedagogically?

   If not, should they be?

   How should this requirement be set up?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

ADVISORY COUNCILS/CRAFT COMMITTEES
(CONTINUED) (9/80)

TEACHER CERTIFICATION AND COMPETENCY (CONTINUED):

3. Do you assist in retraining and skill updating efforts for VE teachers?

   If so, what is your role?

STUDENT COMPETENCY:

1. Are you pleased with the students graduating from the Vo-Tech programs?

   If not, why not?

   What are your recommendations for improvement?

2. Are standards and tests for measuring student competency currently in place at the AVTS?

3. If a yes response is given to #2, do you participate in developing these standards and tests?

   What is your role in this development process?

   Are these standards updated periodically?

4. If a no response is given to #2, do you think standards and tests of student competency should be developed?

   How can you assist in this effort?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

ADVISORY COUNCIL/CRAFT COMMITTEES
(CONTINUED) (9/80)

VOCATIONAL EDUCATION AWARENESS:

1. What is you impression of the public information effort that the Vo-Tech schools are making?

2. Do you participate in public awareness activities?

   If so, what is your role?

3. How could awareness of and confidence in Vo-Tech schools be improved?

4. Are trades people aware of VE teaching career option?

   If not, how can we increase awareness and stimulate interest?

MISCELLANEOUS:

1. Do you think that the AVTS is responsive to your council's/committee's recommendations?

   If not, why not?

   How can your relationship with the AVTS be strengthened?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR LABOR & INDUSTRY (9/80)

INTRODUCTORY:

1. What is your relationship (if any) with the area vo-tech schools?

   Purpose of the relationship?

   Suggestions for strengthening?

   If none, why not?

NEEDS ANALYSIS:

1. Do you participate in a labor market needs analysis for vo-tech schools in your geographic area?

   a. What is your involvement in the needs analysis?

   b. If so, when was the last needs analysis done?

   c. How frequently are they updated?

   d. How are the results of the needs analysis used by the vo-tech schools?

      By industry?

COUNCIL/COMMITTEE ROLES:

1. Does your union (industry) have representatives who serve on the Advisory Council and/or Craft Committees of the vo-tech schools?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR LABOR & INDUSTRY (9/80) (CONTINUED)

COUNCIL/COMMITTEE ROLES (Continued):

2. If so, what is their role as a council/committee member?

3. How do you feel about the effectiveness of these groups?

   Do they get desired results?

   Suggestions for strengthening?

STUDENT COMPETENCY:

1. What are you looking for from a vo-tech graduate? (Prioritize)

2. Are you pleased with the students coming out of vo-tech programs?

3. If you are displeased/unhappy with students coming out of the vo-tech programs, why?

   What recommendations do you have for improvement?

4. What (if any) is the relationship between vo-tech training and your apprenticeship or other labor/industry training programs?

   Do you feel you have to retrain vo-tech grads or that they have acquired the basic skills?

   Do you prefer vo-tech grads to regular academic high school grads?

   What are the reasons for your preference?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR LABOR & INDUSTRY (9/80) (CONTINUED)

STUDENT COMPETENCY (Continued):

5. Have standards and tests been developed to measure progress toward achieving desired levels of competency?

6. Have standards and tests been developed to determine whether the desired level of competency has been achieved by students upon graduation?

7. If the responses to questions 5 and 6 are yes, do you get involved in developing standards (desired levels of competency) and/or tests for measuring student competency?

   What is your role?

   If no role, do you think involvement would serve the industry by providing better qualified students?

8. If the responses to questions 5 and 6 are no, do you think mechanisms should be used to measure student competency?

INSTRUCTIONAL STAFFING:

1. Do you feel the current vo-tech teachers have the necessary skills, both trade and teaching?

2. In your opinion, what are the major strengths and weaknesses?

3. Do you help recruit vo-tech teachers?

   What is your role?

INSTRUCTIONAL STAFFING (Continued):

4. If not, how can you be supportive of recruitment efforts?

   Do you feel this would be to your advantage?

5. Do you provide or would you be willing to provide technology and equipment updating to vo-tech teachers to improve their competency?

6. What are your sources for recruiting industry trainers?

VOCATIONAL EDUCATION AWARENESS:

1. What is your impression of the public information effort that the vo-tech schools are making?

   How could awareness of and confidence in vo-tech schools be improved?

   What do you see as your role in improving the image of the vo-tech system?

2. Do you think that most trades people are aware of the teaching career option?

3. If not, how could we increase their awareness of the teaching alternative?

4. Do you supply tracking information on vo-tech graduates to the AVTS?

   If not, would you be willing to?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR LABOR & INDUSTRY (9/80) (CONTINUED)

VOCATIONAL EDUCATION AWARENESS (Continued):

5. Do you think your responses to these questions are reasonably representative of industries in this area?

   If not, identify what you consider to be significant variants?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT CENTERS
(9/80)

FUNCTION:

1. What is the role of the center in assisting to meet the needs of AVTS for qualified instructional personnel?

2. What are the significant role variations as pertaining to:

   a. Health occupations education

   b. Trade and industrial education

   c. Agricultural education

   d. Home economics education

   e. Distributive education

   f. Business education

   g. Industrial arts education

3. What is the relationship between the center and the Department of Education?

   the AVTS?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT CENTERS
(CONTINUED) (9/80)

LABOR MARKET NEEDS ANALYSIS:

1. What mechanisms are used to determine present and future demand for teachers to meet staffing needs of the vo-tech program?

    a. Is demand being met?

    b. If not, what are the causes and recommendations for change?

2. How are the results of labor market needs analyses used to add, delete or modify enter curricula?

3. Are curricula presentations responsive to needs analysis indicators in terms of course content, frequency of presentation, and accessability to both full and part-time students?

CURRICULA:

1. Is there a standard or core curriculum offerred by the various higher education institutions to meet the sixteen credit requirement for certification as Vocational Instructional Level I?

    If yes, what comprises this curriculum?

    If no, would it be appropriate to establish such core curriculum?

2. Is there a standard or core curriculum offerred by the various higher education institutions to meet all or some part of the additional forty-four credits required for certification at VI-II?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT CENTERS (CONTINUED) (9/80)

CURRICULA (CONTINUED):

If yes, what comprises this curriculum?

If no, would it be appropriate to establish such core curriculum?

3. What programs are offerred to vo-tech teachers to assist them to maintain competency in view of rapidly changing technology?

4. Is there a system in place for accumulating points for non-credit seminars, industry training, etc. to satisy certification requirements?

If yes, describe.

If no, should there be?

Suggestions?

TEACHER CERTIFICATION AND COMPETENCY:

1. Are present requirements for various levels of certification for vocational education appropriate?

2. What revisions to each level of certification do you recommend?

3. Do you favor periodic re-certification to reasonably assure maintenance of trade competency and pedegogical skills?

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

VOCATIONAL EDUCATION PERSONNEL DEVELOPMENT CENTERS
(CONTINUED) (9/80)

TEACHER CERTIFICATION AND COMPETENCY (CONTINUED):

If so, what measures do you suggest to achieve such a change in certification?

4. Re-certification implies setting of standards and some form of performance measurement in relation to the standards. Do standards and measurement mechanisms exist?

If so, obtain relevant material.

If not, have you suggestions for proceeding with development of standards and measuring mechanisms?

VOCATIONAL EDUCATIONAL AWARENESS:

1. How do you assist AVTS in the development and implementation of information programs directed toward enhancing the image of vocational education among students, parents, labor organizations, industry, community, etc?

2. What measures do you take to create an awareness of vo-tech teaching as an alternative to practicing in business or industry?

3. Describe your student recruitment program.

4. What incentives do you use to encourage potential students to enroll in curricula leading toward vocational education teaching careers?

5. Do you have a student placement and tracking program which would be supportive of AVTS's recruitment efforts?

Describe.

VOCATIONAL EDUCATION PERSONNEL SYSTEM

INTERVIEW GUIDELINES FOR

VOCATIONAL EDUCATIONAL PERSONNEL DEVELOPMENT CENTERS
(CONTINUED) (9/80)

VOCATIONAL EUCATION PERSONNEL SYSTEM:

What suggestions do you have for the design and implementation of a personnel information system which would facilitate recruitment of vo-tech teachers?

STATISTICAL (ALL DEPARTMENTS):

1. Present enrollment (1980)_________________

2. Projected enrollment: 1981___________; 1982___________; 1983___________

3. How many and what proportion of graduating students enter (3 years):

   a. Vo-techs: 1978 No._____, %_____; 1979 No._____, %_____; 1980 No._____, %_____
   b. Industry: 1978 No._____, %_____; 1979 No._____, %_____; 1980 No._____, %_____

4. What are the primary reasons for selecting other than the vo-tech system?

5. Suggestions for inducing more graduates to opt for vo-tech teaching careers.

APPENDIX II

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B. Pennsylvania Department of Education

C. Area Vocational-Technical Schools

D. Labor and Industry

E. Vocational Education Personnel Development Centers

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